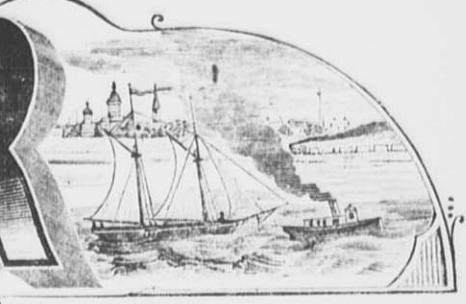
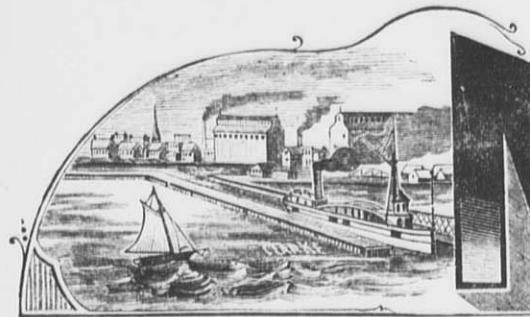


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Volume 7.—No. 2.

MILWAUKEE, JUNE, 1879.

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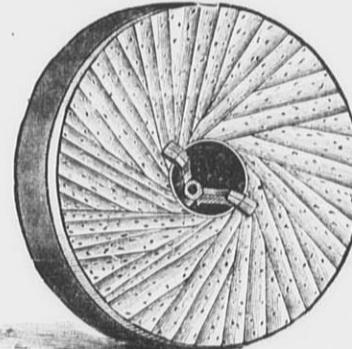
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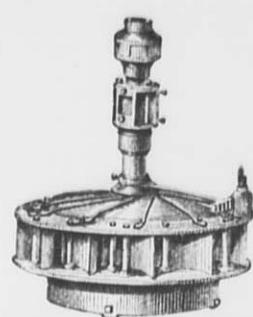
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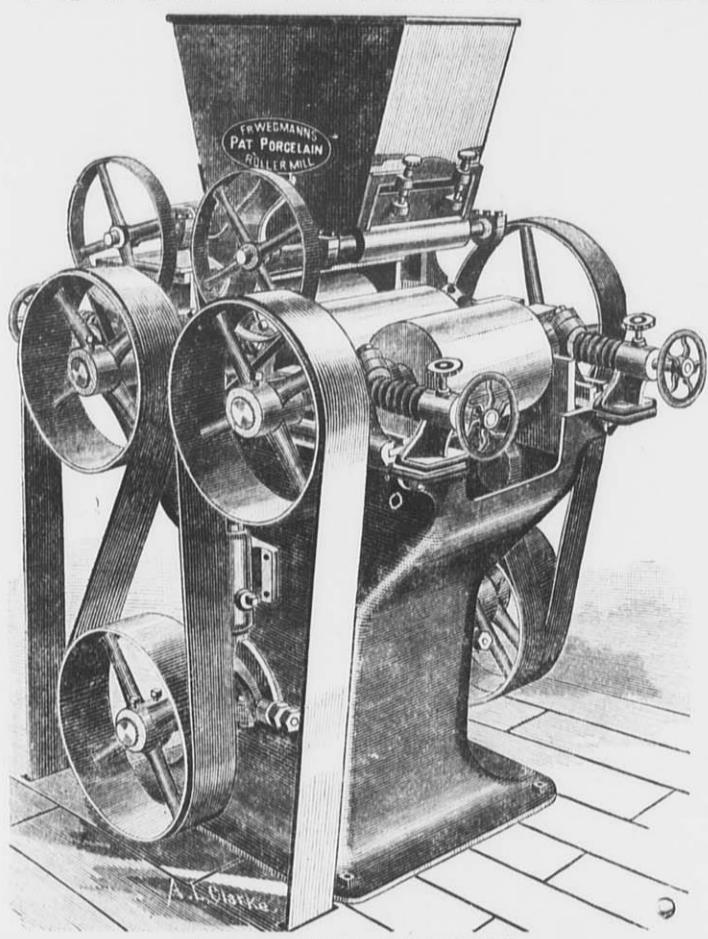
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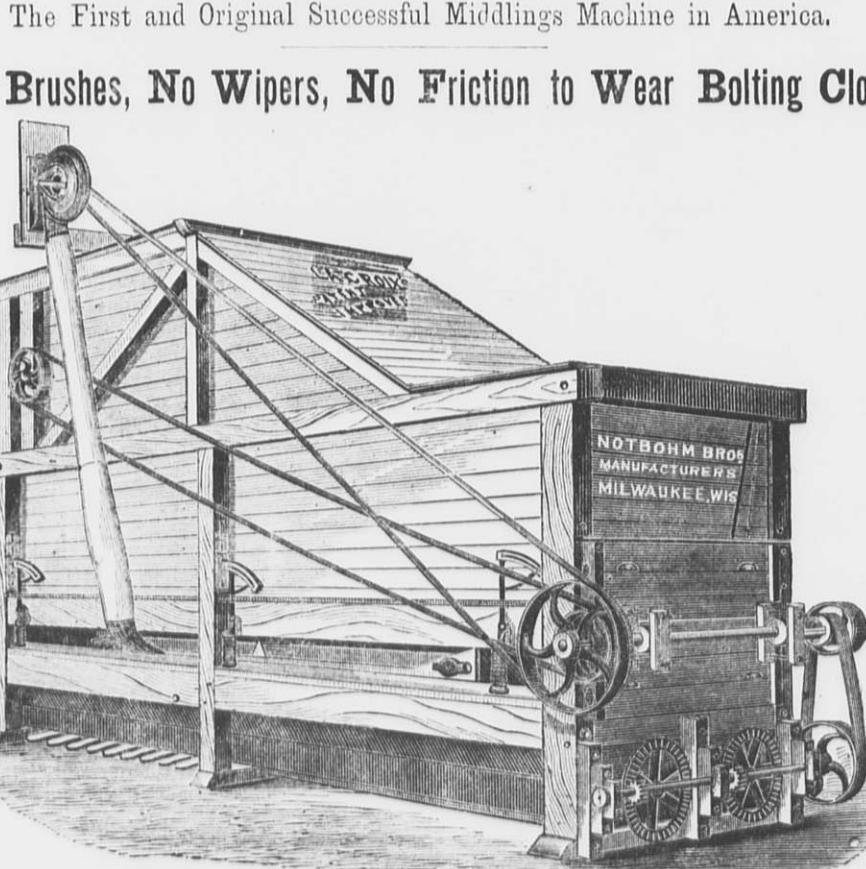
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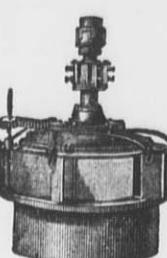
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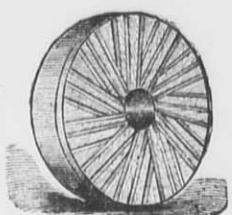
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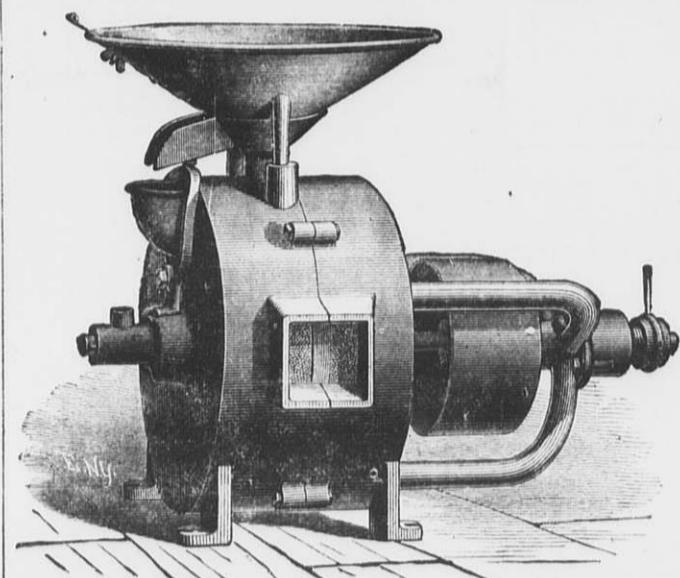
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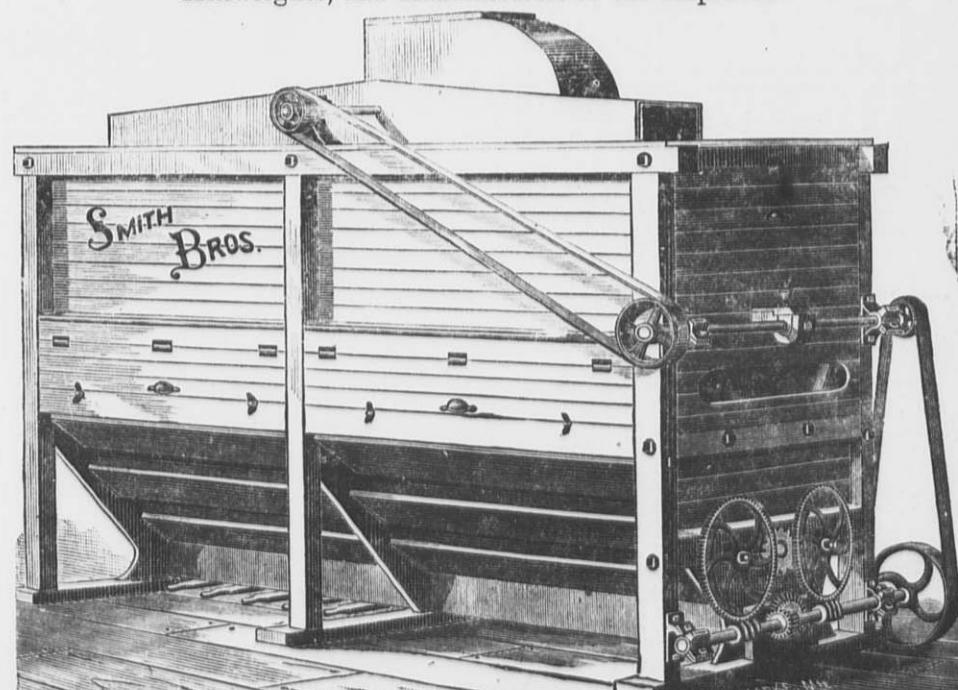
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Volume 7.—No. 2.

MILWAUKEE, JUNE, 1879.

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Under-Runner Mills.

Editor United States Miller:

Under-runner mills should, I think, be constructed on a somewhat different plan from those now ordinarily in use, and I would suggest an arrangement something as follows:

Let the spindle be long enough to reach above the upper stone and have a bearing in a fixed bridge-tree. Then have a bearing below the hurst, immediately under the runner, which will guide the spindle and take away the spring from the belt or gear, said bearing to be movable and adjustable by set screws. This will give three bearings to the spindle (including the step at the lower end) all three outside of the stones. Make the driver with three wings inserted in the lower side of the runner. This will give a substantial and rigid connection to the spindle and the runner will retain its position and uniform motion because it is never taken off from the spindle. The upper or fixed stone should be firmly set in a wooden box or iron frame casing, said frame having four bearings regulated by set screws so that it can be adjusted to make the face parallel with the face of the runner. In taking it up for dressing the bridgetree with the upper bearing is removed and the stone turned over on its hinges like a trap door.

The accompanying cut will illustrate my idea.

A is the upper stone fastened in a frame; said frame swings over with the stone in position in *P*. The stone is secured to the frame by bolts, as shown in the drawing.

B is the under stone or runner; *A* are the burr stones; *C* is a flat stone of any kind that is solid, fitted and fastened in the iron hoop which surrounds the runner, in which is fitted a three-winged driver *C*, and fastened therein about the same way as the bail is fastened in other mill-stones.

D are two stout irons with bolts, bored out to fit the upper part of the spindle, and fastened to the spindle after the runner rests on the spindle, and then the two ends get fastened in the burrs as the driver below.

E is the mill-spindle where the driver is fitted on, as drawing shows it.

F is the bridge-tree above the upper stone where the spindle is secured in a box.

G is another box, in or below the hurst frame, to secure the spindle against the spring originating from the driving belt or gear below, and so keeping the spindle steady and said box is regulated by set screws.

H is a side view of the iron frame which incloses the curb, and has on each corner the bearings for the top stone frame, where said frame is fastened and regulated up or down by means of set screws. *D* is a bolt in a slot hole through the iron frame; a nut is sunk in the upper stone frame to receive said bolt, and thereby preventing any unsteadiness of the bridge-tree above.

K is a view of the front side of the iron frame.

L is a top view of the upper stone frame, with the stone, the bridge-tree and the bearing for spindle.

M is a top view of the iron frame with curb and stone in place.

N shows how the iron frame is fastened together.

The runner must be balanced on the spindle before it is put in place. I use two iron flanges, each one fits the spindle, in which are three holes for bolts, which reach through the eye of the stone; set the stone upright put the spindle in the driver, take on each side the flange, fasten them with the bolts, and lay the spindle with the stone on two iron rails, one on each side of the stone, and close to the stone, high enough so that the stone turns free above the floor, and then dress off from the underside, till the stone is balanced.

This is my idea about the under runner-mill. I will furnish the patterns for castings, and

will answer any question relating to this system, if any one feels interested in it.

Yours truly,
F. E. KLOPFLEISCH,
657 short st., Milwaukee, Wis.

High Milling, or the Austrian System of Grinding.

(From Professor Kick's new work on Milling.)

High Milling—or, as it is also called, Vienna, Austrian, Hungarian, Parague, or Saxony milling—is that method of grinding wheat which, by a gradual reduction of the grains of wheat, aims at producing the largest quantity of middlings, which, being cleaned, reground, and again cleaned, &c., and consequently gradually reduced, is finally manufactured into

Schrot. After this product has passed through the sieves, the different sorts are graded according to their size, consequently all those bran particles, which are of equal fineness with the flour mingle with the flour, and those of the same size as the so-called *Dunst*, with the *Dunst*, &c. It is scarcely possible to separate from the flour the equally fine bran particles; this is done, however, as far as the middlings and Dunst are concerned, by means of middlings purifiers.

The question now is, of which parts of the grain of wheat does the several products consist? The flour obtained from the first grinding (*Schroten*) will be better, in other words, will contain fewer bran particles than that

the purifying machine, in which they are gradually reduced. In many places they neither purify the middlings nor the *Schrot*. If during the preliminary grinding (*Hochschröten*) germs get loosened from the grain, they get knocked off especially during the first grinding, and arrive in proportion to their size, for the most part uninjured, among the coarse middlings, to which they impart, by their yellow color, a speckled, yellow appearance. The product of the preliminary grinding is separated, and the middlings and *Schrot* will show the customary method of manipulation. The products of the preliminary grinding are distributed as follows through the bolting cylinder:

Fine parts. Middlings, No. 3, 4, 0, 5.	Medium parts. <i>Dunst</i> , Flour.	For the middlings cylinder.
		For the middlings cylinder.
For the silk or flour cylinder and divided into *Flour No. 3 or 4. <i>Dunst</i> and middlings.	Coarse middlings for further grind- ing.	Middlings No. 3, 2, 1, 0 for the purifying machine.
		For the purifying machine.

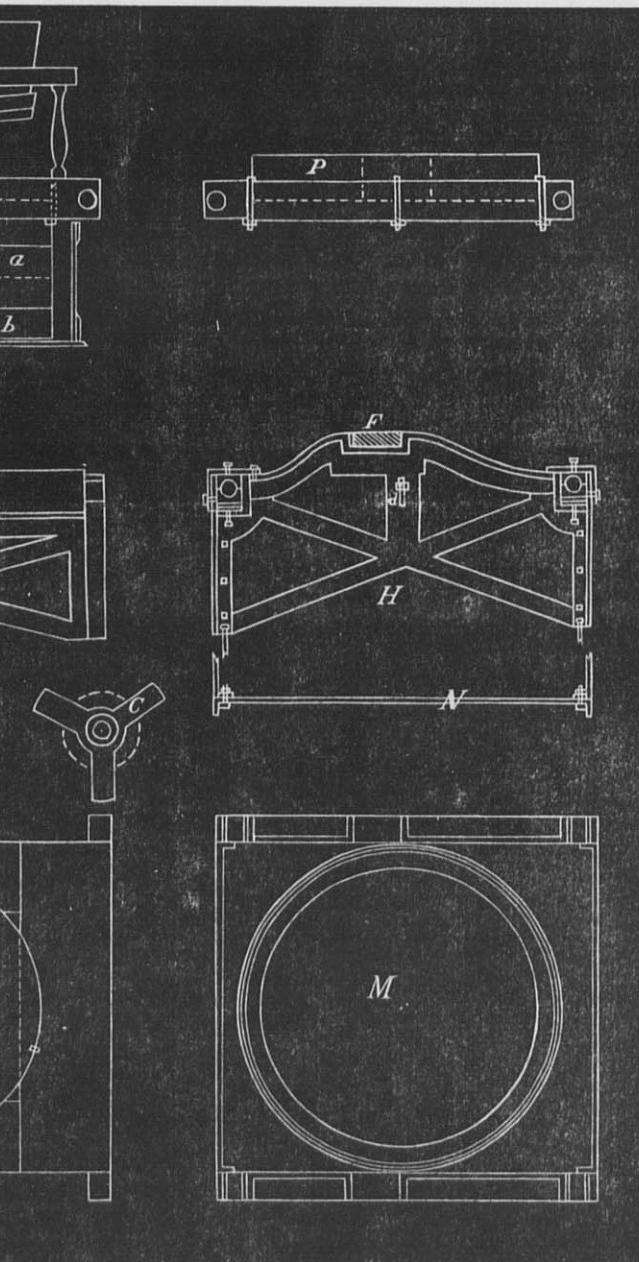
Coarse parts.
Clean coarser middlings, or so-called *Schrot*.

For the coarser middlings purifier, thence back to stone for second coarse grinding.

*It may be useful here to state that in the Austrian flour mills they give to the finest flour No. 00, and to the coarsest No. 6. In the middlings, on the contrary, No. 5 is the finest and No. 0 the coarsest. In many mills No. 6 middlings is the same as what is called *Dunst*.

It is exceedingly difficult, nay, even impossible, to give to non-practical men anything like a clear idea of the nature and appearance of the various milling products either by description or illustration. The only way in which he can become acquainted with them is by seeing them in a well conducted mill, where high milling is practiced.

The first rough grinding is followed by a second, the second by a third and the third by fourth, but the number of these is not in all mills alike. We must not imagine, however, that in these successive divisions or breaking up of the grain, that in the preliminary grinding (*Hochschröten*) the grain is broken in two, and by the first grinding (*Schroten*) it is broken into four pieces, &c.; on the contrary, the division when the stones are rightly placed, is so managed that at each successive operation the several parts gradually lose their polyhedral or spherical shape, and assume a lamelliferous form. In the first, second and third rough grindings, the greater part of the grain is consequently reduced to flour and middlings, and the material which undergoes fourth grinding has become so far triturated that no coarse middlings can be got from it, but only dust mixed with numerous particles of outer husk. Along with these we obtain flour as well as coarse and fine husk. There are scaly particles consisting of gluten, and the cuticle of the germ and the grain, to which a perceptible number of starch cells adhere. In many mills these scaly particles are called stripes, in fact those remaining after the fourth and fifth grinding, white stripes; and after once more grinding black stripes. The fine and coarse roughs are in many mills ground together, in others separately. The former go also by the name of *Huspan*. By ground roughs and ground *Huspan*, we understand those scaly parts which, by their repeated passage through the stones, are freed from the particles of flour adhering to them, which serve as fodder for cattle and horses, and are distinguished by the general name of bran.



UNDER-RUNNER MILLS.

flour. This system of grinding, which originated in Vienna, produces the most beautiful, and the whitest, and generally the finest kinds of flour, in proportionately larger quantities. In the Austrian system of grinding, the stones are placed at such a distance from each other that the first time the grain passes through them it is only slightly rubbed and broken. In this operation the beard and parts of the cuticle would be rubbed off, if this was not done before by the hulling machine. This operation is called ending (*Spitzen*), or, in case the stones grind more coarsely (*Hochschröten*), inasmuch as in this coarse grinding the grain is broken along the entire length of the furrows, so that the produce therefrom is mixed with flour, bran particles, and germ that have been scraped off. The products are separated by sieves, and the result is dark flour, poor bran, and coarse, middlings. The latter product is passed through stones placed more closely together, and is subjected to the first grinding, that is to say, it is further broken, and we obtain particles varying in size, flour, *dunst* (which is analogous to flour), middlings, and a still coarser commodity called

obtained by the operation of *Hochschröten* above described, but it will nevertheless contain a great number, seeing that the stone exercises a breaking action upon the grain, and more or less reduces the cuticle.

Dunst and fine middlings are mostly composed of small fragments of the flour substance, and in the process of breaking fall from the inner as well as from the innermost part of the grain, and become polluted by the admixture of bran particles of equal fineness. If these are removed by the middlings purifier, we obtain pure middlings, which in consequence of being derived from the innermost part of the grain, are called *core-middlings* (*Kerngriese*), or, because they are used for making the finest flours, *Auszugmehle* and *Auszugriese*.

The coarser middlings (*Auflosungen*), and the still coarser *Schrot*, are fragments which, the larger they are, the more certain are they to be overlaid with portions of the layer of gluten, of the skin of the germ and the grain, and are, consequently, of a much darker color than pure middlings. The coarse middlings, and the coarser *Schrot* are put through

Morris & Worrell, of Pekin, Ill., are putting in new buhrs, purifiers, cleaning machines and bolts, for New process work. Nordyke & Marmon Co., of Indianapolis, Ind., furnish the machinery.

The mill at Glenwood, Iowa, operated by Nic. Girard, is having two new run of buhrs, and necessary machinery for new process, furnished by Nordyke & Marmon Co., of Indianapolis, Ind.

THE UNITED STATES MILLER.

UNITED STATES MILLER.

E. HARRISON CAWKER, EDITOR.

PUBLISHED MONTHLY.

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All Drafts and Post-Office Money Orders must be made payable to E. Harrison Cawker.
Bills for advertising will be sent monthly unless otherwise agreed upon.

MILWAUKEE, JUNE, 1879.

We send out monthly a large number of sample copies of THE UNITED STATES MILLER to millers who are not subscribers. We wish them to consider the receipt of a sample copy as a cordial invitation to them to become regular subscribers. We are working our best for the milling interest of this country, and we think it no more than fair that our milling friends should help the cause along by liberal subscriptions. Send us One Dollar in money or stamps, and we will send THE MILLER to you for one year.

Now She Grinds.

A bill has been filed by Edw. P. Allis on the 31st ult., in the United States Circuit Court for the Eastern District of Wisconsin, against Seamans & Stevens—owners of the Empire Flouring Mills at Milwaukee. S. H. Seamans, as a member of the Executive Committee, joined in a report to the Millers' Convention at Chicago, to which attention is called in the columns of this paper, giving notice that members who did not purchase or use rolls made or licensed under Downton's Patent, would not be defended by the Association. Mr. Allis, who holds an assignment of Downton's Patent, has now commenced a suit for an injunction, and laying his damages at \$25,000, because Messrs. Seamans & Stevens are using the Downton Process without having first obtained license from him as assignee of R. L. Downton.

Bills, we understand, are now being prepared against other members of the Executive Committee and Millers' National Convention who have purchased from Downton or others, and Mr. Allis seems to be determined, in view of the action of the Executive Committee at the late Convention, to make it rather lively for all who propose to ignore his rights as assignee."

THE Milwaukee Middlings Millstone Co. are now preparing plans for a 50-run mill on the South Side in Milwaukee.

CHAS. HERMAN, Good Hope, Milwaukee Co., is going to rebuild his mill. Smith Bros. are getting out plans for same.

M'LEAN'S Millers' Text Book and the UNITED STATES MILLER, for one year, for \$1.25. Order now. Send money or postage stamps.

N. LUDINGTON & Co., Escanaba, Mich., are putting in their sawmill a 66-inch Leffel water wheel. Smith Bros. millwrights, are doing the job.

MESSRS. SCHRANDENBACH & SON, of Okaweechee, Wis., have purchased a 20-inch middlings mills from the Milwaukee Middlings Millstone Co.

THE term of subscription paid for by many of our subscribers expired with our April number. We hereby call their attention to it, and hope they will soon remit for another year.

MR. JAMES M. LYON, of Singapore, India, has been corresponding with the Milwaukee Middlings Millstone Co. in regard to furnishing a mill, and will in all probability close a contract for a complete outfit.

We will send a copy of the MILLERS' TEXT BOOK, by J. M'LEAN, of Glasgow, Scotland, and the UNITED STATES MILLER, for one year, to any address in the United States or Canada, for \$1.25. Price of Text Book alone, 60 cents. Send cash or stamps.

The UNITED STATES MILLER has the largest circulation of any milling journal published in America, and was the first milling journal started in America entirely independent of connection of interest with some machine or mill-furnishing establishment.

THE Milwaukee Middlings Millstone Co. are receiving a great number of inquiries from Europe, and especially from Germany, in regard to their system of milling, which seems to be attracting the attention of millers all over the world.

WISCONSIN MILLERS.

Proceedings of the Sixth Semi-Annual Convention.

Held at the Newhall House, Milwaukee, June 4th, 1879.

The Convention was called to order at 2:30 p. m., by President Sanderson, who remarked that the small attendance was no doubt owing to the very recent session of the National Association at Chicago. But he thought those present could doubtless do as much work and do it as well as though there were more of them.

As the minutes of the previous meeting had been published they were dispensed with.

The Treasurer read his report, which showed that the receipts during the last six months were \$8,437.80; the disbursements \$2,724.90; the balance on hand, \$717.84; the amount due from the National Association, \$1,700, and the total amount of assets, \$2,417.84. Upon motion of Mr. Schuette, of Manitowoc, the report was accepted and adopted.

The following report was then read by the Secretary:

Mr. President: Since my report in December last, we have only added 16½ runs of stone to our membership. On our assessment, levied June 11, '78, there are fully paid up 40½ run of stone, but on the 5th there has been paid only upon 37½ run. Of these delinquent we can reasonably expect payment on 20 run more, the balance will probably drop out for inability to pay. Our last assessment was only \$5 per run to meet an urgent demand of the Executive Committee of the National Association for money to finish off the great Cochrane suit at St. Louis. This would not have been necessary had all the States met their assessments promptly. We are now in advance to the National Association \$1,700. Our assessments for the coming year will not exceed \$10 per run for all purposes, and after this year we can reasonably expect that \$5 per run will be entirely sufficient. And it is hoped, and we have certainly good reasons to expect, that hereafter our expenses for litigation will be comparatively light. The great Cochrane fraud is buried beyond hope of resurrection, and the very favorable arrangements made by the Executive Committee of the National Association has put it within the power of every one who infringes the claims of the Barter, Smith (mechanical and process) and Stoll patents, to get rid of them at a sum only 1-10 of what was originally claimed on any one of these claims, and the great inducement for the committee to entertain a proposition looking to a settlement of all these claims in a lump was the fact that, if they could compromise them at a sum which they (the committee) were willing to offer, it would be for the best interests of the Association to consummate such an arrangement, and by so doing would soon see the end of all litigation, and the law department of our Association might be abolished with all its evils and attendant expenses. As a member of the Executive Committee of the National Association, I would say that the committee were unanimous in the decision after a thorough, and I may say tedious, investigation of the whole case. The committee were all "fighting" men (if I may use this term) and being, by the reason of the recent success, in a position to dictate satisfactory terms, were not inclined to accept only such terms as, in their judgment, were just and equitable, and as a copy of these terms have been sent to every member, he can best judge whether they are satisfactory to himself or not. I would add, however, that while the negotiations were pending, and before a vote was taken in the committee to make or accept any proposition looking to a compromise, your Secretary called a meeting of Wisconsin members attending the convention, including the President, a majority of your Executive Committee, and a number of the members of the Association, when it was resolved to abide by such action as your Secretary deemed best to take, looking toward a settlement of the claims named, and upon the basis mentioned in the confidential circular sent you, and I feel assured that there is not one member of this Association but would decide, could he have gone through this investigation with the committee and had all the facts placed before him, that the committee had acted wisely.

There remains now the "Denchfield suction claims," to be contested, which we are sanguine will be beaten as signally as the Cochrane. When I state to you that the amount of

compromise asked by the owners of this claim (the patent for which has now expired) is more per run of stone than it has cost to fight and beat the Cochrane claims of \$6,000 per run, and to fight and settle all the claims of G. T. Smith, Barter, Stoll and Downton combined, yet there are millers who say they gain nothing by joining an Association,—but their time is coming. Only members of the Association, or who may become such prior to July 15th, can avail themselves of the benefits of the settlement made by the National Millers' Association. After that date they must settle upon such terms as the ring may dictate, and I can give them good assurance that they may expect to help make up "that little sum," which the ring expected to get out of the Association and failed. At the same time I would urge upon the members of the Association to meet the terms in the confidential circular before the time mentioned therein expires, for after that time they may be obliged to make another bargain that will not be nearly as satisfactory. The Executive Committee also accepted a proposition from R. L. Downton for his "process patent," by which the Patent Office has granted him the right, unjustly we think, to the use of rolls upon certain products of new process milling, known as tailings. This proposition does not affect any one until he has established his claim by a decision before the Court. These claims are now in litigation at St. Louis; also in this city between Downton and E. P. Allis & Co., in regard to the validity of an assignment from Downton to Allis & Co. So long as this was a contest between the parties in interest, the millers could look on complacently, and see that the suit was fairly contested, and no compromise effected, by which the rights of the millers might be jeopardised. But Allis & Co., instead of waiting the decision of their suit now before the Court, have forfeited the sympathy of the milling fraternity by launching out and bringing suits against the millers on a claim yet to be established, and which is already being contested. As every case brought in this way has thus far failed, we may reasonably expect this will fail also.

There is another patent, recently re-issued, known as the "Barker"—which is intended to cover the use of the graded sieve in combination with the sectional draught in a purifier. As this is a matter of little importance to the successful working of a purifier, it is of little consequence except for bull-doing purposes. Our action at the last meeting in regard to the unjust discrimination in the rate of freight on mill-feed, by reason of it being put in a different classification and paying a higher rate, had the desired effect, and it was placed back in some class with wheat and like products, and pays the same rate of freight.

The most important business before you at this meeting is the adoption of a binding and legal constitution, which shall be uniform with that of other States, and in conformity to that adopted by the National Convention at its late session in Chicago. Respectfully submitted,

S. H. SEAMANS, Sec'y.

Some discussion followed in relation to the value of the roller patents and Downton's claims, during which Secretary Seamans read a communication from Messrs. E. P. Allis & Co., in reference to the action of the Executive Committee, at Chicago, on that point, and claiming that whatever value there might be to the Downton Patent it was vested in them. President Sanderson remarked that he did not believe the Downton Patent was worth a cent, any way, no matter who owned it, and, as far as he was concerned, he should never pay a cent of royalty or license to any one.

On motion of Mr. Schuette, the communication of Messrs. E. P. Allis & Co. was received and placed on file.

In answer to Mr. Kimberly, Secretary Seamans stated that the Geo. T. Smith Co. claims, settled for by the Executive Committee, only covered machines using the specified combination of wind blast (or suction), vibrating sieve and brush under the sieve. There were several machines that did not infringe this combination.

The convention then proceeded to consider the new constitution proposed for adoption. This constitution which is identical with that adopted by the Minnesota Association was read by the Secretary, and upon motion of Mr. Schuette was adopted by a unanimous vote.

Mr. Sanderson moved that the formation of the State Associations had been the means of saving the millers of the country millions of dollars. If it had not been for the State and National Associations it would have cost an immense sum to settle the claims already made against them. He trusted the attention and interest heretofore shown in the State organization

would not flag, but increase. The Association should elect good officers in whom they had confidence, and then assist them by harmonious and united action. He urged the members present to talk the matter of Association up with their neighbors that all might enjoy the great benefits to be derived from it.

On motion of Mr. Sanderson, the thanks of the Association were tendered to the proprietors of the Newhall House for the use of their parlors.

The Secretary stated that Theodore Conkey, of Appleton, Vice-President of the Association had, upon retiring from the milling business, tendered his formal resignation.

The resignation was accepted, and Mr. S. R. Willey, of Appleton, was elected to fill the vacancy.

No further business coming before the convention, on motion the Association adjourned sine die.

THE Milwaukee Middlings Millstone Co. have an order for mills from Pesth, Hungary.

Willis' Point, Texas, is having a new process mill in process of erection. The proprietors, Messrs. Cain & Dickard, bought the machinery of Nordyke & Marmon Co., of Indianapolis, Ind.

Hiram Watters, M. E., of Akron, O., is at Mankato, Minn., giving his personal attention to the completion of a twelve-run mill, which is being built by Hulbert & Paige, of Painesville, O., for R. D. Hubbard & Co.

Advertisers will consult their own interests by patronizing the UNITED STATES MILLER, which circulates almost exclusively amongst the flour milling class. It has the largest circulation of any milling paper published in America, and was the first independent milling journal started in the United States not being connected in interest with any patented machine or milling supply house.

WE hope all who receive sample copies of the UNITED STATES MILLER will favor us with their early subscription. The price—one dollar per year—is a mere trifle, and ensures you a first-class paper containing a great quantity of matter of direct interest to your trade. Do not delay, but send your order now. Enterprising, go-ahead millers cannot afford to be without the current milling literature of the day.

The following mill furnishing firms use Walker's belt tightener for operating mill-stone and machinery belts in mills which they fit up: John T. Noye & Sons, Buffalo, N. Y.; Munson Bros., Utica, N. Y.; M. Deal & Co., Bucyrus, Ohio; and C. B. Slater & Co., Blanchester, Ohio. The well established reputation of these firms is a sufficient guarantee for the excellence of any machinery they may adopt, especially when, as in this case, they use the goods of other parties, though they have the choice of other kinds which they can manufacture themselves.

IMPORTANT NOTICE.

TO THE PARTY RECEIVING THIS PAPER WHO IS NOT ALREADY A PAID SUBSCRIBER.

We hereby extend to you a cordial invitation to become a subscriber to the UNITED STATES MILLER. We shall endeavor to make it of the greatest possible use and benefit to the milling fraternity, and no mill should be without it. The best talent that we can obtain in this and other countries will contribute to its columns, which will also be enriched by carefully translated articles on subjects of interest to the craft. Subscription price, \$1. Enclose money or stamps in an envelope, seal carefully, and send at our risk. By return mail you will receive a receipt therefor. Address

THE UNITED STATES MILLER,
Milwaukee, Wis.

Special Business Notices.

Do you need a good Saw Gummer or Saw Tooth Swage? If so write to J. W. Mixer & Co., Templeton Mass. Agents wanted.

NOTICE.—Owing to the death of Mr. Edward Harrison, we take this method of informing you that the business will be continued until further notice, and that all orders will receive prompt attention. Letters should be directed to the "Estate of Edward Harrison," New Haven, Ct.

IMPORTANT NOTICE TO MILLERS.—The Richmond Mill Works and Richmond Mill Furnishing Works are wholly removed to Indianapolis, Ind., with all the former partners, tools, and machinery, and those of the firm who formerly built up and established the reputation of this house; therefore, to save delay or miscarriage, all letters intended for this concern should be addressed with care to Nordyke & Marmon Co., Indianapolis, Ind.

SPECIAL NOTICE.—We desire to make known to the millers of the United States that we have secured license under the Barker and Sherburne patents, and by purchase, have secured exclusive right to the Palmer & Plamondon patent, and are thus in position to fully guarantee our customers against prosecution in the use of the Garden City Purifier.

COLLINS & GATHMANN, Chicago, Ill.

GENERAL NOTES.

THE Milwaukee Middlings Millstone Co. have sent several mills to Grand Rapids, Mich., lately.

THE Milwaukee Middlings Millstone Co. have a contract for a 10-run mill at Leavenworth, Kansas.

THE Milwaukee Middlings Millstone Co. are furnishing a complete outfit for a 6-run mill at Washington, Pa.

THE Milwaukee Middlings Millstone Co. have shipped a number of mills to St. Louis during the past month.

THE Schlitz Brewing Co., of Milwaukee, have ordered a 22x48 ft. Reynold's Corliss engine, of Ewd. P. Allis & Co.

MESSRS. C. H. BROWN & SON, of Dakota city, have purchased a 16-inch mill from the Milwaukee Middlings Millstone Co.

MR. JOHN WILLIAMS' mill at Logansville, Wis., furnished by the Milwaukee Middlings Millstone Co., started up last week.

THE Milwaukee Middlings Millstone Co. have contracted to build a 4-run mill for Mr. W. H. Delamater at Baldwin, Mich.

MR. F. W. STOCK's 12-run mill at Hillsdale, Mich., furnished by the Milwaukee Middlings Millstone Co., will start up this week.

EWD. P. ALLIS & CO. have the contract for the new mill at Frontenac, Minn., being built by Messrs. Hoyt & Seagar, of St. Paul.

CAWKER City, Kansas, is going to have a flour mill, and the Milwaukee Middlings Millstone Co. have the contract to furnish it.

THE Milwaukee Middlings Millstone Co. have sold a 16-inch middlings mill to the John F. Smith Iron Works, at Ironton, Wis.

MESSRS. S. H. BRADLEY & CO., of Mendon, Ill., have purchased a number of mills from the Milwaukee Middlings Millstone Co. during the past month.

THE Milwaukee Middlings Millstone Co. are so crowded with work that their shops are running day and night and the business constantly increasing.

THE Milwaukee Milling Co. are contemplating enlarging their mill to twice its present capacity. The Milwaukee Middlings Millstone Co. will have the contract.

EWD. P. ALLIS & CO. are receiving a great many orders for their wheat granulators, which, with their smooth porcelain rolls, are being put into nearly all the first mills of the Northwest.

EWD. P. ALLIS & CO., of Milwaukee, shipped, on the 26th of last month, 25 of their patent belt movement porcelain roller machines to London, England, and have orders for many more.

The flouring mill of C. Link's Sons, near Paris, Ill., was totally destroyed by an incendiary fire, May 16th. Loss, \$14,000, with no insurance. It is said that the firm intend to rebuild in Paris.

A serious break occurred recently in White & Son's mill dam at Renville, Minn., a piece forty feet long by nine feet deep being washed out. The neighbors turned out and helped repair the damage.

THE works of Ewd. P. Allis & Co. are running day and night, employing over 400 men. They have orders for fifteen of their Corliss engines and over 100 roller machines, besides a large amount of mill work.

The following flour shipments were made from Duluth by vessels clearing last Sunday evening: The Asia, for Sarnia, 2,035 barrels; the Japan, for Buffalo, 4,100 barrels; the Quebec, for Sarnia, 1,000 barrels.

Mr. M. T. Boult, Battle Creek, Mich., has contracted with Messrs. Hulbert & Paige, Painesville, O., for a new process five-run water mill for the Riverside Mill Co., which will be located at Appleton, Wis., during the present season.

Messrs. Colton Bros., of Bellefontaine, O. (one of whom is Secretary of the Ohio Millers' Association), are building a fine four-run new process mill. Their mill furnisher and designer is the Nordyke & Marmon Co., Indianapolis, Ind.

C. A. WHITE & CO., of La Crosse, Wis., have contracted with Edw. P. Allis & Co., of Milwaukee, Wis., for their new gradual reduction mill. This mill will be very complete, and embraces much of the Hungarian system. Allis & Co. made the plan and are to furnish the entire work, including porcelain rolls, a Reynold's improved corliss engine and all the machinery and mill-wright work.

A New Flour, Grain, and Bolting Cloth Inspector.

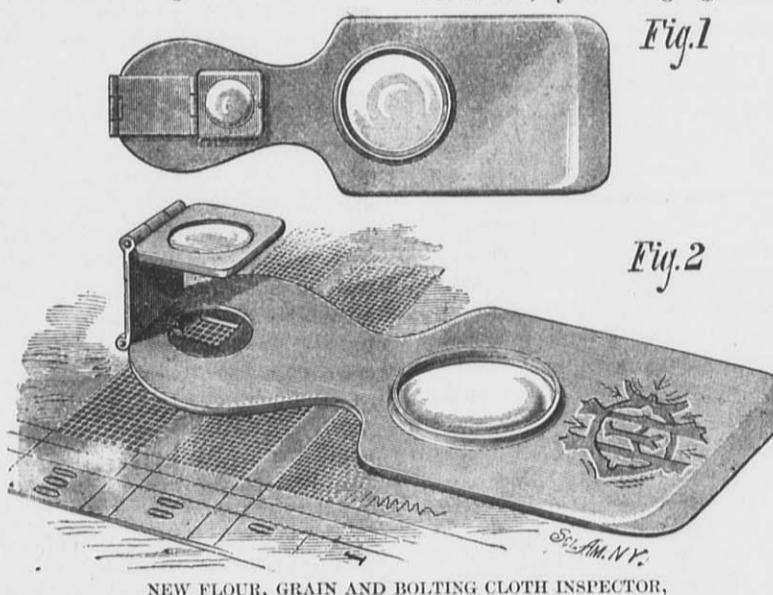
The accompanying engraving represents a convenient little instrument, which the inventor, Mr. H. J. Deal, calls the Board of Trade flour, grain, and bolting cloth inspector. It consists of an ivory spatula, in the center of which is mounted a fine lens of sufficient power to detect anything irregular in the flour or grain. When not in use, the cloth glass, which is hinged to the handle of the spatula, is folded down, as shown in Fig. 1. When it is desired to use it, it is unfolded and brought over the opposite side of the handle, as represented in Fig. 2. The length of the link which supports the glass is equivalent to the focus of the lens, so that no adjustment will be required. The square aperture in the handle below the lens is equivalent to one-sixteenth of a square inch, or one-fourth of an inch on each side. When the handle is placed over the bolting cloth the number of its meshes may be readily counted and its quality inspected.

In using the larger lens, the flour or other substance to be examined is first smoothed with the ivory spatula; the lens is then held at a suitable distance.

The instrument is designed for the use of

missioner under the law to prescribe such a requirement. Acting-Commissioner Doolittle decided that the position taken by the Examiner was correct, and that the patent could not issue until Rule 91 had been complied with, inasmuch as that rule had been made for the express protection of the American public, in order to give them the free use of an invention patented here as soon as the monopoly of the same (previously obtained in a foreign country) had there expired. Upon receiving the decision of the Acting-Commissioner, the applicant appealed to the Secretary of the Interior, who sustained the position taken by the Examiner and Acting-Commissioner, and pointed out both the necessity and justice of Rule 91, in order to protect American citizens, showing that it discriminated in favor of no class of inventors as against another. These three concurrent decisions may be taken as settling this point.—*American Miller.*

This number of the UNITED STATES MILLER is increased in size to 20 pages. Ten thousand copies will be mailed to all sections of the country. Those who receive sample copies will, we think, consult their own interests as well as ours, by becoming regular subscribers.



NEW FLOUR, GRAIN AND BOLTING CLOTH INSPECTOR.

the Board of Trade, millers, and others who have occasion to inspect grain, flour, or any similar substance.

This invention was lately patented by Mr. Henry J. Deal, who may be addressed at 35 Union Square, New York, or at Bucyrus, O.

A FLOUR mill at Baalzen, Saxony, has been destroyed by an explosion of flour dust.

THE Miller and Baker's Journal is the name of a new paper just issued in Budapest, Hungary.

MESSRS. POOLE & HUNT, of Baltimore, have just issued the neatest and handsomest catalogue we have seen this long while.

FOURTEEN wheat cargoes have arrived during the past week, and about twenty-five are due to arrive during the coming week.

EWD. P. ALLIS & CO. report large orders from Cleveland, Baltimore, Richmond, Va., and New York, for their porcelain rolls.

THE demand for American flour abroad is rapidly increasing. This soon will have a decidedly perceptible effect on the business of English and French millers.

"OFF with the old love, and on with the new," says the jolly miller, as he buys a bundle of export flour sacks instead of his accustomed load of barrels, as heretofore.

DECISION IN THE TOUFFLIN PATENT CASE.—The Secretary of the Interior has just given a final decision in the case of the application of Jean B. Toufflin for letters patent for improvement in apparatus for reducing grain, etc. (Toufflin's Disintegrator) filed October 15, 1878. In this application, the Examiner in the Patent Office found that a patent for fifteen years had been granted in France, December 17, 1877, numbered 121,659, and an English patent for fourteen years, Feb. 9, 1878, sealed July 30, 1878, to a person of the same name with applicant, and for the same invention. Thereupon the Examiner required the applicant to comply with Rule 91, which prescribes that an "Applicant whose invention has been patented abroad should state the fact that a foreign patent has actually been obtained, giving its date, and if there be more than one, the date of each." Though this rule seems one with which any reasonable person would be willing to comply with, the applicant refused to do so, denying the power of the Com-

The price, one dollar per year, is nothing compared to the value of such a paper in your mill.

The Compromise.

Of course, the most interesting thing accomplished at the late Milling Convention was the compromise of patent suits. As the terms upon which the compromise were made are secret to all save those members of the Association who are pecuniarily interested, it is impossible to state whether they are favorable or not. It is presumable, however, that they are. There was a long and hot discussion of the compromise question before the Sub-Executive Committee, and it was only after mature deliberation and the advice of Lawyer Harding that the terms were accepted. The action of the Committee has been criticised severely by many millers, but there is no doubt but what they did the best they could under the circumstances.

FOR some reason the *Grain Cleaner* criticises President Geo. Bain and Jos. Gent of the Committee on Milling at the late convention. He calls the first "frivolous" and the last "impolite." Now this is too bad. These gentlemen ought to go up to Moline and take lessons of the amiable editor of the *Grain Cleaner*. Perhaps, however, he would have looked at things differently, if it had not been for the "strawberry shortcake" or that "steamboat ride." If there was anything mean about Gent, he got rid of it during that never-to-be-forgotten steamboat excursion.

THE millers of Kentucky organized a State Association May 21st. W. N. Potts, of Richmond, was elected President, and L. H. Notogel, of Lexington, Secretary.

MR. ISAAC D. HALLOCK, JR., of Poughkeepsie, N. Y., proprietor of the "East Mills," is remodeling and repairing his mill for the New Process. It will be the first complete New Process mill in Dutchess Co., and has a first-class never-failing water power to start with.

MESSRS. COLLINS & GATHMANN now license their machine under the Smith, Stoll and Barker patents. These gentlemen have always had the interests of their patrons at heart, and they have taken such steps as might protect them in the use of the Garden City Purifier under any and all contingencies.

WE have the pleasure to inform our readers that Mr. Adolf Fischer, of Budapest, Hungary, one of the leading authorities on milling subjects in Europe, will favor the UNITED STATES MILLER with a series of letters. We hope to be able to publish the first of the series in July.

Rules of the Milwaukee Chamber of Commerce for the Inspection of Grain.

WHEAT.

NO. 1 Spring Wheat—Must be sound, well cleaned, weighing not less than fifty-eight pounds to the measured bushel.

Extra No. 1 Spring Wheat—Shall be composed of plump, sound, well cleaned spring wheat, bright in color, and weighing not less than sixty pounds to the measured bushel.

No. 1 Hard Spring Wheat—Shall be composed mostly of the hard varieties of spring wheat, which must be sound, well cleaned, and weigh not less than fifty-eight pounds to the measured bushel.

No. 2 Spring Wheat—Must be sound and reasonably clean, and weigh not less than fifty-six pounds to the measured bushel.

No. 3 Spring Wheat—Shall comprise all wheat fit for warehousing, weighing not less than fifty-four pounds to the measured bushel.

No. 4 Spring Wheat—To be fit for warehousing, otherwise unfit for the higher grades, weighing not less than fifty-one pounds to the measured bushel.

Rejected—Shall comprise all wheat fit for warehousing, but too low in weight, or otherwise unfit to pass as No. 4.

WINTER WHEAT.

No. 1 White Winter—To be sound, well cleaned, reasonably plump, and composed of the white varieties.

No. 1 Red Winter—To be sound, reasonably plump, and composed of the red varieties.

No. 2 Red Winter—To be sound, reasonably clean, and composed of the red varieties.

No. 1 Winter—To be sound, well cleaned, reasonably plump, and composed of mixed white and red winter.

No. 2 Winter—To be sound, reasonably clean, and composed of white, or mixed white and red winter.

No. 3 Winter—Shall comprise all winter wheat fit for warehousing; weighing not less than fifty-four pounds to the measured bushel; not sound enough or otherwise unfit for No. 2 of the other grades.

Rejected Winter—Fit for warehousing, but otherwise unfit for No. 3.

Mixed Winter and Spring Wheat—In the case of a mixture of any considerable or material quantity of winter wheat with spring wheat, it shall be called *mixed wheat*, and graded according to the quality thereof, as provided for in the rule governing the inspection of spring wheat with reference to weight and condition.

Rice Wheat—Will in no case be inspected higher than rejected.

COARSE GRAINS.

CORN.

No. 1 Corn—Must be plump, sound, dry and well cleaned.

No. 2 Corn—Must be sound, dry and reasonably clean.

Rejected—All corn fit for warehousing that from any cause falls below the standard of No. 2.

OATS.

No. 1 Oats—Shall be white, sound, clean and free from other grain, and reasonably bright.

No. 2 Oats—To be sound and reasonably clean.

No. 2 White Oats—Shall be sound, reasonably clean, reasonably free from other grain, and composed mostly of white oats.

Rejected Oats—Damp, unsound, dirty, or from any cause unfit for No. 2.

RYE.

No. 1 Rye—To be sound and well cleaned.

No. 2 Rye—To be sound and reasonably clean.

Rejected Rye—Unsound, but fit for warehousing.

BARLEY.

No. 1 Barley—Shall be of a bright, natural color, plump, sound, well cleaned and free from other grain.

No. 2 Barley—Shall be sound and reasonably plump, reasonably clean, and free from other grain—good malting barley, but may be slightly stained.

No. 3 Barley—Shall include all shrunken, discolored, but reasonably sound barley, and fit for malting purposes.

Rejected Barley—Shall include all barley unsound or for any cause unfit for No. 3, but fit for warehousing.

INSPECTION FEES.

The fees for inspecting grain under the foregoing rules, as established by the Chamber of Commerce, are fifteen cents per car-load, and for inspecting cargoes of grain out of the railroad elevators thirty cents per thousand bushels; and out of all other elevators and warehouses, forty cents per thousand bushels.

WHAT CONSTITUTES A CAR-LOAD OF GRAIN.

The following rule of the Milwaukee Chamber of Commerce, now in force, shows what constitutes a car-load of grain:

RULE XVIII. SEC. 1. In all sales of grain by the car-load, it shall be the rule that twenty thousand pounds shall constitute a car-load of wheat, sixteen thousand pounds a car-load of oats, eighteen thousand pounds a car-load of corn, eighteen thousand pounds a car-load of rye, and sixteen thousand pounds a car-load of barley, unless otherwise agreed upon by the parties.

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THE UNITED STATES MILLER.

UNITED STATES MILLER.

PUBLISHED MONTHLY.

OFFICE, 62 GRAND OPERA HOUSE, MILWAUKEE, WIS.
Subscription Price..... \$1 per year in advance
Foreign Subscription..... \$1.50 per year in advance

MILWAUKEE, JUNE, 1879.

THE UNITED STATES MILLER has now commenced its seventh volume, and has become universally acknowledged to be one of the most valuable milling journals in America, both for the purpose of transmitting knowledge on milling and mechanical subjects and as an advertising medium for introducing and selling all kinds of modern milling machinery. It is our aim to meet the wants of our patrons, whether manufacturers or consumers. Our editorial course will be entirely independent, and we shall do our best to give our readers the benefit of the latest important news on subjects pertaining to the objects of this paper. Our circulation and advertising patronage cover all sections of the country. We do not deal in machinery ourselves, and consequently have no "axes to grind." We cordially invite all those who have already patronized us to continue their patronage, and those who have not to try our columns. We append herewith our

ADVERTISING RATES FOR 1879.

	1 mo.	2 mos.	3 mos.	6 mos.	1 year.
One inch card.....	\$2 00	\$4 00	\$5 50	\$10 00	\$20 00
Two ".....	4 00	8 00	11 00	20 00	40 00
Four ".....	6 00	12 00	16 50	30 00	60 00
One-half col. (8 inches).....	10 00	20 00	30 00	60 00	100 00
One-fourth page.....	20 00	40 00	60 00	120 00	200 00
One-half page.....	40 00	80 00	120 00	200 00	400 00
One page.....	100 00	150 00	200 00	400 00	800 00

Size of page, 12x18. Length of column, 16 inches. Width of column, 2½ inches; 4 columns to each page.

Business editorial matter per line, 30 cents. If over 50 lines, 25 cents.

Illustrations charged for in proportion to space occupied.

Advertising for Millers wishing situations, or millers wanting to engage employees, 50 cents.

MILL FOR SALE advertisements, \$2 each insertion.

We have recently published a *List of Names and Post-Office Addresses of the Flour-Mill Owners of the United States and Canadas*, which is of great value to those who desire to communicate by circular with American mill-owners. The price is \$5 per copy, post paid. Cash must accompany the order.

We have also lately published a *Sac and Planing Mill Directory of the United States and Canadas*. Price, \$5.

Subscription price to the UNITED STATES MILLER, \$1 per year.

McLean's Millers' Text Book, which every miller should have. Price by mail, 60 cents, post paid.

Ropp's Easy Calculator, which every business man should have in his pocket or on his desk. Price by mail, post paid, \$1.

Our Job Printing Department is one of the finest in the State, and particular attention is paid to all kinds of commercial work, which we can do on the most reasonable terms. Parties desiring to publish catalogues, circulars, etc., should send for estimates.

Address all communications to the
UNITED STATES MILLER,
62 Grand Opera House, Milwaukee, Wis.

COL. KING, of Minneapolis, estimates the wheat crop of Minnesota for 1879 at 40,000,000 bushels.

POSTAGE stamps taken in payment of subscription to the UNITED STATES MILLER and the Millers' Text Book. \$1.25 pays for both for one year.

MINNEAPOLIS, St. Louis and Chicago parties are experimenting yet on the bran packing question. Some American inventor will solve the problem yet.

CAWKER don't like the calling of a building 40x50 feet, square. And now, then, Cawker, what would you say in a case of that kind? —Abernathey's Grain Cleaner (May.)

Comment is unnecessary. Hold us, somebody.

ON the first day of "ye merrie month of May," our sanctum was cherished by a visit from J. S. Karns, Esq., representing the well-known house of John T. Noye & Sons, Buffalo, N. Y. Mr. Karn reports business opening out lively and predicts a generally prosperous year.

MESSRS. STILWELL & BIERCE, of Dayton, Ohio, manufacturers of the well known "Eclipse" and "Victor" Turbine water wheels, have just issued a new and handsome catalogue. This firm is meeting with especially great success in introducing the VICTOR wheel.

STILWELL & BIERCE Manufacturing Co., Dayton Ohio, inform us that they have greatly reduced the price of the Eclipse wheel and their Lime Extracting Heater and Filter for 1879, and have issued new catalogues which they will take pleasure in mailing free to all parties who will apply for the same.

MAY 6th we were favored with a call by Mr. John Ernst, representative of the bolting cloth house of Henry Pestalozzi, No. 11 Dey street, New York. They deal in the original "HET ANKER" brands of bolting cloth, which is well known throughout this country for its evenness of mesh, great strength and durability.

JONATHAN MILLS' new gradual reduction machines excited great interest among the millers in Chicago lately, and they will un-

doubtedly do their share in the expected complete revolution during the next decade. Mr. Mills has been working hard now for a long time to perfect his machines and feels confident that he has done it.

MR. S. H. SEAMANS, of Milwaukee, was duly elected Secretary and Treasurer of the Millers' National Association, and all business in their behalf should, hereafter, be addressed to him. The Association has secured an able officer, and Milwaukee has reason to feel gratified at the compliment paid to one of her citizens.

SINCE the convention, Milwaukee has been visited by a great number of millers and manufacturers. The millers, most of them, visited the new mill of the Milwaukee Milling Co., and were delighted to see the workings of this novelty in milling, which has proved so wonderfully satisfactory. The Milwaukee Middlings Millstone Co. manufacture the grinding mills used, and are crowded with orders.

THE Missouri State Millers' Association met in Chicago during the convention and reorganized their constitution to agree with that adopted by the National Association. The most important change made was that fixing the term of membership at ten years instead of making it terminable, as at present. Officers for the ensuing year were elected as follows: President, E. Goddard, St. Louis; First Vice-President, John Crangle.

THE Cockle Separator Manufacturing Co. of Milwaukee, shipped on the 25th an elegantly finished machine of very large size for exhibition in London at the coming great milling machinery show. The woodwork was of black walnut and the castings were nickel plated. It is a foregone conclusion that it will take the premium, as nothing in the way of a cockle separator has ever given half the satisfaction as those made by this company.

AMONG the articles on exhibition at the late Millers' Convention which attracted unusual attention was Lehman's Method of Truing Millstones and Lehman's patent Bosom Staff for Millstones. All who investigated it were surprised and pleased, and sales were numerous. None who have tried either, have found any fault, but on the contrary express their warmest approbation. It deserves the attention of all millers. We advise all to investigate it.

THE steamboat excursion given to the millers at the recent convention was, all in all, a most pleasant affair. "True 'tis, and pity 'tis, 'tis true" that many a jolly miller was obliged to surrender his two-dollar dinner very unceremoniously to the fishes in consequence of the terrible pitching of the boat. The music by the Chicago Quartette Club was excellent, also that by Johnny Hand's band. The Cat Opera, by the Quartette, was thoroughly amusing and drew the remark from an old dusty that he "heard that song 20 years ago on top of the woodshed."

LIKE London, Milwaukee is to have a new building to accommodate its Chamber of Commerce. The plans have not yet been thoroughly settled upon, but will undoubtedly be matured at an early day. Meanwhile the busy dealers transact their business in a commodious building on Broadway, and some extensive deals have already been made in their new quarters. Quite a number of visitors from different parts of the country may be seen daily "On Change" watching the transactions of our "bulls and bears."

ALL the Milling Journals in the United States were represented at the late Millers' Convention, and most of them seemed to enjoy the occasion hugely. The UNITED STATES MILLER hereby returns thanks to the American Miller people for the many courtesies extended. Mr. Chisholm, especially, seemed everywhere present and doing his best to make things pleasant. The proprietors of the Deutsche Americanische Mueller, and also of the Millers' National Magazine, were attentive to the wants of all. The milling press of Chicago cannot be beaten as hospitable gentlemen.

THE MILLING INTERESTS OF MINNEAPOLIS.—Minneapolis, Minn., now holds the second place of importance in the manufacture of flour in this country, and it is probable that it will soon hold the first. In May, 1878, there were 199 runs of stone in operation, 88 of which were destroyed by the great explosion. Since then the old mills have been rebuilt (with one exception) and new ones built, so

that now the mills of Minneapolis have 377 runs of stone or their equivalent. Rollers have been extensively introduced, and to a certain extent have taken the place of millstones. The total value of flour-mill property built during the past year is estimated by the Minneapolis Tribune to be worth \$1,890,000. The Minneapolitans have every reason to feel pleased with their future prospects.

AT the entrance of a restaurant in Pesth, where beautiful young ladies are employed to stand and wait, is posted a notice reading: "Gentlemen are requested to abstain from kissing the waiters on the stairs, as this is a fruitful source of breakage, and impedes the service." —Ex.

That settles it. We are going to Pesth to study up Hungarian milling,—we are going to board at that restaurant—and, by jinks, we'll have those confounded stairs removed.

The Becker Brush.

We respectfully call the attention of our readers to the advertisement of the well-known Becker Brush. This brush has met with the hearty approval of hundreds of millers in all sections of the country during the past two years, and the Eureka Mfg. Co., of Rock Falls, Ill., is kept busy with orders. Write to them for prices, description, circular, etc.

Attention, Wisconsin Millers.

WISCONSIN STATE MILLERS' ASSOCIATION, Secretary's Office, MILWAUKEE, May 20th, 1879.—The semi-annual meeting of the above association will be held at the Newhall House, in this city, Wednesday, June 4, 1879, at 2 o'clock p. m., sharp. This will be a very important meeting, and a full attendance is expected. The principal business will be the adoption of a constitution, the formation of the association upon a legal basis. An opportunity will be offered those not members to join and reap the benefits of the settlements made by the Executive Committee of the National Association.

S. H. SEAMANS, Sec'y.

The Minneapolis Millers Beat the Insurance Companies.

The case of ex-Gov. Washburn against the Western Insurance Company, was called for trial in the United States Court, in Cincinnati, April 25th. After a trial of seven days the case went to the jury. They brought in a verdict in ten minutes in favor of the plaintiff for the full amount claimed. This was one of eight cases pending in the same Court involving the same questions of law and of fact. The plaintiff was represented by Sage & Hinkle, and the defendant by T. D. Lincoln, J. F. Follett and others. Lincoln and Follett spoke twelve hours. This litigation grew out of the fire at Minneapolis, May 3d, 1878, which resulted in the mill explosion and loss of life at that point.

[A Card.]

The Compromise.

No similar period in our history has been so alive and active with improvements relating to flour mills as the eight years just past. The terrible prejudice against so-called new-fangled inventions has been quite overcome and many valuable changes adopted. Middlings purifiers wrought the radical change, and their use necessitated additional new systems of machinery to carry out the new process work. They were built, as is well known, in various ways to accomplish the same result. Three hundred letters patent were issued on the different devices comprising them, but our predictions of several years since that the simple method so successful at first, viz., a machine having a sieve covered with bolting-cloth, with suction above and something to clean the cloth, would be the universal machine, have been endorsed, and it is conceded that such is the best machine. Our knowledge and experience with purifiers began with their first introduction by the late E. N. Lacroix, who at that time had a mill near ours in the southern part of Minnesota, and as we bought the patents of Lacroix, their validity and the bearing of other patents was naturally of great importance to us. We therefore spent much time and careful attention with their investigation, going through the records and everything appertaining to them at Washington. Several years since, when we were building machines with revolving brushes and were compelled from the best authority we could get to concede that the patent to Geo. T. Smith covering the combination of a suction, sieve and brush was valid, and immediately ceased to build them, adopting the traveling air-blast instead of the brush. Our information and opinion regarding Smith's patent was freely given and circulated without the solicitation of Smith, but it brought forth venom and prejudice from many deceived and unreliable informed millers, in fact so great was the feeling against us that resolutions were passed by our State Association calling us in league with Smith in same manner as they considered John Webster, of Michigan, who, it will be remembered, was appointed on the committee to investigate Smith's right by the Michigan Association, and who took the same stand we did. Our business reputation was greatly injured by such resolutions and we trust that they will be rescinded. The promise made at Chicago by the Association which recognized Smith's patent was therefore, as will readily be seen, of the utmost importance to us, and we congratulate the Association and the Smith's Purifier Co. for it, believing that our aid in that direction will be appreciated from both. Respectfully,

NOTBOM BROTHERS.

THE Goodyear Rubber Co., of Milwaukee, is a branch of the largest concern of the kind in the world, and all goods are sold in Milwaukee at same prices as at manufactory. Millers and dealers can rely on getting a good article in belts, hose, or any other goods in the line, at lowest rates.

A Correction.

ST. LOUIS, May, 1879.—Editor *United States Miller*—DEAR SIR: The letter and editorial notice in your paper this month, was more an injustice to the millers than to me, creating in their minds a security which is utterly false to the facts. So far as to the case being decided against me, legally, it is false, and I never was so certain of winning as I am to-day—in fact I believe as an expert that it is entirely impossible to beat the patent. The decision of the Court was as follows viz:—

United States Circuit Court, East District Mo., ss, at Court April 26th, 1879. R. L. Downton complainant, vs. Yaeger Milling Co., defendants. In Equity. The Court not being fully advised in the premises as to this cause, heretofore submitted, it is ordered that arrangements therefor be had at the next term of this Court, to which time the cause is continued. A true copy.

Attest: M. M. PRICE, Clerk,

per A. P. Delby, deputy.

I trust to your spirit of fairness to insert this in your next issue. Yours truly,

R. L. DOWNTON.

MILL MACHINERY manufacturers were present in full force at the last convention and the following list we think, comprises them all. If we have omitted any, we beg pardon:

F. M. Riegel & Co., Dayton, Ohio, Thompson's circular proof staff; Jno. A. Hafner, Pittsburg, Pa., Hafner's model mill; Reel & Seyler, Cedarville, Ill., champion middlings purifier; Thos. McFeely, Union City, Ind., diamond stone dresser; Caldwell & Watson, St. Louis, Mo., Caldwell's patent conveyor; Andrew Hunter, Chicago, Ill., Hunter's middlings purifier; Milwaukee Middlings Millstone Co., Milwaukee, Wis., Jonathan Mills' middlings mill; Geo. Oliver, Rochester, N. Y., United States bran duster; LaCroix Middlings Purifier Co., Indianapolis, Ind., LaCroix purifier; Eureka Manufacturing Co., Rock Falls, Ill., Becker brush; Collins & Gathman, Chicago, Ill., Garden City middlings purifier; A. B. Bowman, St. Louis, Mo., wheat heater; Downton's Middlings Purifier Co., St. Louis, Mo., Downton's rolls; Arthur Cropley, Georgetown, D. C., millstone driver; Three River Manufacturing Co., Three Rivers, Mich., corundum millstone dresser; Gratiot Bros., Platteville, Wis., wheat heater; Dr. Allen, New York City, grain weigher; Peninsula Stone Co., Akron, Ohio, samples of stone; Webster & Co., Chicago, Ill., elevator buckets; Jno. Orff, Fort Wayne, Ind., diamond millstone dresser; Mr. Holt, Chicago, Ill., millstone driver; Brower & Bennett, Fox Lake, Wis., elevator buckets; Arndt & Lawton, DePere, Wis., samples from bran machine; Western Electric Co., Chicago, Ill., magnets and their action on wire and other metallic substances in wheat; J. Kelner, Milwaukee, Wis., millstone driver; Hide, Leather and Belting Co., Indianapolis, Ind., belting; Empire Middlings Purifier Co., Watertown, N. Y., Empire middlings purifier; Jas. H. Weaver & Co., Chicago, Ill., flour sample envelope; Wm. Lehman Milwaukee, Wis., proof staff; Schultz & Co., St. Louis, Mo., patent fuller leather belting; H. J. Deal, Bucyrus, Ohio, wheat heater and steamer; Danford Manufacturing Co., Geneva, Ill., champion bag holder; Barnard & Leas Manufacturing Co., Moline, Ill., grain scourer; M. Deal & Co., Bucyrus, Ohio, California smutter; Cary Cooper, Oskaloosa, Iowa, carrier middlings mill; H. & L. Chase, St. Louis, Mo., sacks for export use; Munson Bros., Utica N. Y., portable mill.

THE UNITED STATES MILLER.

NATIONAL MILLERS.

Sixth Annual Convention of the Millers' National Association.

Held at Chicago, Ill., May 13th, 14th, and 15th, 1879—Official Report.

FIRST DAY—TUESDAY, MAY 12, 11 A. M.

The Convention assembled at the appointed hour, the Appellate Court room being crowded with members of the Association and others interested in the deliberations of that body. Mr. Thos. Heermans, Chairman of the Local Committee, introduced Hon. Carter Harrison, Mayor of Chicago, who greeted the Convention in the following

Speech of Welcome:

MR. PRESIDENT AND GENTLEMEN OF THE CONVENTION: It becomes my pleasing duty to welcome you to the City of Chicago. We feel a deep interest in the miller and in the millers' productions. Chicago sits supreme in the midst of the greatest grain-field of the world. Surrounding her are six great States, Indiana, Michigan, Illinois, Wisconsin, Minnesota and Iowa. These six States produce one-half of all the wheat grown in the whole land, more than half of all the corn, over one-third of its oats and about one-third of its barley.

Placed thus as she is, with one hand on the reaper, gathering in the grain, and the other upon the tiler of the ship which is to carry it to distant lands, she feels that she should receive the Millers' Association with most cordial greeting. She tendered you her heartfelt welcome, and I, as her chief officer, offer you her free hospitalities. I can assure you that you have the best wishes of every one of her citizens.

We feel that the miller is entitled to our highest homage. He has ever been one of the first and greatest promoters of civilization. In his earliest days man gathered the wild-grown seeds and acorns, and ground them upon his own grinders. Then came the hand stone. As the means for pulverizing grain grew in perfection, civilization and progress grew. The plow may be called the first civilizer, but hard upon it followed the mill. Its music was first heard by the gurgling brook. Wat was its motor, and man increased in happiness.

But to-day water has given way to steam, and the mill's music is everywhere heard, and wealth has become fabulous. Steam enables the West to feed a hungry world, and you are its agents. [Great applause.] We welcome you as one of the great civilizers of the world. After all that may be said, it is abundance of food which makes mankind kindly and good. [Applause.] It is generally the hungry man who commits crime. "Defend me from yonder hungry Cassius," showed how well Caesar understood human nature.

You gentlemen have the high duty of driving off hunger. And the faces now looking up into mine convince me that you will do well your part. You will stretch out your hand to the field, and will aid it and America to perform its grand duty. Chicago offers you her aid in sending your handiwork to the uttermost parts of the world. You and she will thus do more to spread our glorious republican institutions than armed armies could possibly do, and will help to strike down all tyranny. [Applause.]

Again, gentlemen, I welcome you to Chicago, and invite you to partake of all she has that is good, and I assure she has a great deal. [Laughter.] As her chief magistrate and the head of her police, I will try to protect you should any of you fall into trouble. I know, coming from small suburban towns like Cincinnati and St. Louis, you will be apt to be tempted into some places which may be new to you. [Laughter.] Large cities offer many temptations to such villagers. [Laughter.] I only ask you to be just a little on your guard; should any of you happen to get in the wrong side of the bridewell, I do not think I will do wrong in promising to pardon you out-to-morrow morning. Again, gentlemen, Chicago tenders you a hearty welcome.

Mr. Heermans then introduced Mr. Asa Dow, President of the Chicago Board of Trade, who spoke as follows:

Mr. President and Gentlemen of the National Millers' Association:

On behalf of the Board of Trade of the City of Chicago, I desire to make you very welcome. We recognize you as the representatives of one of the great commercial interests of this country, and also in all the land's advancements of this remarkable age, has fully kept pace. During your deliberations here we wish you every success, and promise you every aid within our power. In conclusion, gentlemen, I wish to tender you my cordial welcome to our Board of Trade and all the privileges of the city.

President Bain, in response, thanked the representatives of Chicago for their kindly welcome, and felt especially grateful to the Mayor, who had shown very full appreciation of the milling character. For himself and the Executive Committee, he had no doubt but what they could take care of themselves, but there were rural visitors among them to whom the Mayor's kind offer was very grateful. Mr. Bain then presented his annual address.

PRESIDENT'S ADDRESS.

GENTLEMEN:—In deciding to call the Sixth Annual Convention of the Association in Chicago, I had two objects in view. The first, that it could be the more easily attended by a larger majority of our members than if held in any other city; and, secondly, because it was here that what was termed the third Convention of the Millers' Association was held, at which meeting the plans for the Millers' National Association were perfected, and the organization completed at the First Annual Convention held four months later in St. Louis. In reading over, a few days ago, the proceedings of the Chicago meeting as published in the *American Miller*, I discovered that while the founders of the Association fully realized what it might grow to in numbers and influence, they did not dream that a heavy dose of "Patent Sharks" and "Cochrane Rings" would be a necessary adjunct to success, and that without them, while our meetings would always have been very respectable, and at times "jolly" (as becomes a miller), they would have lacked the zest that a \$36,000,000 law suit must necessarily yield to the participants in it. The Michigan millers were in a large majority at that meeting, as they had been at the other preliminary meetings, and we may

thank them, in a large measure, for our late success; for had they not under many difficulties and discouragements persisted in forming a Millers' Association, it would have been impossible for us when our troubles did come, to have organized in a way to make our victory in the Cochrane suits a sure one. At our convention in Buffalo the exorbitant demand of the American Middlings Purifier Co., their representatives there informing us that nothing less than \$6,000 per run of burrs would satisfy them for the flagrant manner in which we had been infringing the Cochrane patents, and robbing an inventor, whose genius in "hind-sight," as displayed in his reissue, completely eclipsed the "foresight" specified in his first application for a patent, were looked upon by most of us as a high joke. A few weeks later, however, when the United States Circuit Court of Minnesota compelled our friend Christian to enter into a \$250,000 bond, and suits were entered for from \$50,000 to \$100,000 each, and injunctions against six milling firms in St. Louis, and, later on, the virtual upsetting (so far as precedent was concerned) of the Deener, Cissel & Welch judgment by the United States Supreme Court, let in a little ray of sunshine; still, when we met something less than a year ago in Indianapolis, we did not feel as happy as we might have done; if we did, most of us took a good deal of pains to conceal it. I doubt if there was a single miller then present who was not positive of the unjustice of the claims that were being made upon us; yet, knowing that law is an "uncertain quantity" (mathematically speaking,) and that mill machinery, and the science of milling, would be of necessity unknown to Courts and Judges, and difficult of explanation to the inexperienced, very few of us but wished we were well out of it, and many weak-kneed brethren clamored for a compromise. Our Executive Committee, however, lacked neither nerve nor back-bone, and the consequence is that our cause prevailed, and those who were then the most frightened, are now the most jubilant. It is unnecessary for me to tell you of the work done by our attorneys, Messrs. Harding, Cole, Judson and Selden, or of the 1,500 printed pages of testimony taken during the pendency of the suit; or of the dozens of models prepared and operated before the Court; or of the eight days of exhaustive arguments of the two first named gentlemen; or of the valuable assistance rendered by my friend Mr. Downton; or of the critical verdict of the learned Judges, Messrs. Dillon and Treat, who, in rendering their decision displayed a better knowledge of the science of milling than half of our members possess; or of the pitiful manner in which Judge Nelson disposed of the case; nor praise the promptness with which the different milling papers got the information to you—the *St. Louis Miller* sending out about sixty columns of reports and giving the decision to the trade in full the day following its utterance; for the report of your Executive Committee will, without doubt, refer to all those matters, and I must not anticipate what will be told so much better by them. But of that committee I have a few words to say. The Executive Committee appointed a sub-committee, consisting of John A. Christian, of Minneapolis; Alex. H. Smith, of St. Louis; S. H. Seamans, of Milwaukee; and J. A. Hinds, of Rochester, to manage the defense of the milling suits, and well and faithfully did they execute their trust. Acting with prudence, firmness and good judgment, sparing neither their time nor their money in furtherance of the duty imposed upon them, they have earned and deserve our lasting gratitude, and I wish they would permit us, in some substantial manner, to show the appreciation we all feel for the zeal and ability they displayed in behalf of the Millers' National Association.

While many of you have come here to congratulate and be congratulated on the results of the late suits, and as our New England brethren phrase it, "to have a good time generally," you must not forget that we have some very serious business to transact before we adjourn. The principal subject will necessarily be the matter of reorganization.

During the trial of the suits at St. Louis, the sub-committee already referred to, took this matter into consideration, and the results of their deliberations were embodied in a circular dated February 2d, a copy of which was sent to every member of the National Association. It is unnecessary for me to dilate upon the necessity of our reorganizing this Association on a strictly legal basis. Heretofore it has been simply a matter of expediency with many of our number as to their obligations to the Association and its members, and few of you can have any appreciation of the trouble the Executive Committee have been compelled to endure from lack of promptness on the part of certain States and members of their associations, in responding to assessments, and such trouble enhanced by the knowledge of their inability to enforce compliance from such delinquents, who, on the other hand, would have felt terribly abused were the funds not forthcoming to defend any suits that were brought against them. Again, each State has its own constitution and bye-laws and some of them a dual organization, those having purifiers contributing to what is termed a "Defense League," the others simply pay a nominal sum to enable them to retain membership in the State associations, and yet willing and ready to be defended against any suits that might threaten them. This was all very well when members were only being sued on account of purifiers, but now that we are threatened with suits on other patents for devices in mill machinery, and when it is proposed to incur expenses in other ways, which I will refer to later on, it is right and proper that ALL should bear their proportionate and just share of the burden. Otherwise we cannot expect our institutions to be permanent.

The third recommendation of the Executive Committee, providing that no member be admitted unless on payment of a sum equal to all past assessments on the old members, is a little too severe in my opinion, especially when the applicant has just built a mill, or purchased an old one, the former owner of which was too stingy to join the Association. When the applicant, however, has been a mill owner during all past trouble, and through fear or other selfish motive desires membership, I would not favor his admission unless his purse was made to suffer in the same ratio that ours had done. On this subject, however, I do not believe it will be expedient to make any arbitrary rules, but rather to invest the National Executive Committee with plenary powers to vary the initiation fees, as in their judgment will be just to the new and old members, first requiring that the applicant shall receive the endorsement of the Executive Committee of the State Association he desires to join, and submit a statement of his claims for a reduction of his fees. In this connection I would also suggest that a vote by ballot should be necessary to admit new members to State Associations, or to the National Association, from unorganized States, and that all applications should be submitted to the regular meet-

ings, the applicant meantime paying his fees and assessments, and enjoying the privileges of the Association till such vote was had, and if his application was rejected his money could be refunded him. There ought also to be some provision for the expulsion of members other than from their non-payment of dues. Although millers as a class will compare favorably with any other class of merchants or manufacturers, yet there are black sheep in every flock, and there are some men engaged in milling that I don't care about being associated with, either in a business, political or social way. While on the subject of membership, permit me also to make another suggestion. In the primary stage of this organization its membership consisted largely of manufacturers and dealers in mill machinery, but when the constitution was adopted at the first St. Louis convention they were asked to take a back seat and remain "without the pale." I was somewhat active in helping the millers then assembled to reach this conclusion, and I am now convinced that I made a mistake in doing so, and now favor their admission on some basis that will be satisfactory to them and just to ourselves. Our success is necessarily theirs, and many of them during the "late unpleasantness," when some of our own members were backward in furnishing the funds necessary to defend the suit, not only unsolicited put their hands in their pockets, but furnished information to our attorneys materially assisting us in gaining the victory. There are black sheep even among them, though, but I am willing to trust the committee to keep them out.

The fourth proposition, that all voting should be based on the number of runs of burrs represented, is an eminently fair one, and while we have had no trouble in the past in voting, there might something arise by which the minority in interest, by the force of numbers, would be enabled to carry through the Convention some proposition that might work injustice to the larger millers.

The fifth proposition, to provide a penalty for non-payment of assessments, if adopted and rigidly enforced, as it ought to be, will certainly prevent a repetition of the troubles and annoyances the committee have been afflicted with the past year.

In many instances, members of the committees and officers of the State association were compelled, in order to keep the suits running, by paying for models, traveling expenses, witness and legal fees, etc., to advance large amounts of money. This money has been repaid to them, of course, but if it gets to be understood that your officers are to be required not only to give their time gratis, for the good of the whole body, but will also be required to furnish funds when necessary, you would find it difficult to get gentlemen to serve.

Some of our members may object to the sixth recommendation, as I understand the Michigan millers, and many individual millers in other States, compromised with the owners of the Denchfield patents, but I must ask these gentlemen to bear in mind that, while the Denchfield people have not been so exorbitant in their demands as were the the Cochrane party, yet the principle was the same in both cases; and if, from fear of a lawsuit and its attendant costs and annoyances, we should compromise an unjust claim, and thereby invite the thousand and one harpies who are watching the results of these initial proceedings to prey upon us, we deserve to be bled to depletion, and compelled to resign the milling business to men of more nerve. Our attorneys, after a very careful examination, have decided that the claims made under this Denchfield patent are not valid, and with that information it is a duty we owe to ourselves and the public to fight it up to the court of last resort. Even if we could compromise for ten per cent. of what it would cost to defend the suits, I should favor the latter course, because in the end it would be the cheaper one. If the owners of the fraudulent patents, and still more fraudulent reissues, find that we cannot be frightened by threats of a lawsuit, they will be chary of commencing one, and the sooner we convince them that such is our determination the better it will be for our purses and our temper.

The justice and utility of the seventh recommendation you will heartily endorse. Although at our first convention we stated that we were in favor of paying liberally for new inventions, although at every convention since we have reiterated the statement then made, and although there is not a piece of patented machinery in our mills that we have not paid from two to five times its first cost for, and for using which we have been sued, or are threatened with suits on, because somebody claims it infringes some obsolete former patent; yet your enemies, assignees by purchase of the fruits of some others' brains, and those whose inventive genius lies wholly in reusing some dead device to cover some successful appliance (a fitting example of which is found in the Cochrane affair), have been trying to convince the public that while we are willing to avail ourselves of anything that will improve the quality of our manufactures, or enhance our "yield," that we are systematically opposed to paying for such improvements. Indeed, such an assertion was made in the *Scientific American*, over the signature of a Washington patent lawyer some two years ago, and you all know how unjust and how undeserved it was.

Now, gentlemen, you must be aware that nearly every month new patents are taken out on mill machinery, but it is years before any number of you have those possessing merit brought to your attention. Oftentimes, too, you or the men in your employ alight upon something that, while valuable to you, you either desire to keep the knowledge of to yourselves, or think not of value sufficient to patent, only to find, after the lapse of four or five years, that you have been infringing some patent issued a year or two previous, and the royalty you are then compelled to pay is a thousand-fold what the original machine would have cost, supplemented with which you have the uncomfortable reflection that you, or your employee, must have seen a description of this machine, process or device, and that the inventor may be thinking that you all the time intended to steal the fruits of his brainwork.

The patentee also may not be in a position financially to bring his invention favorably and promptly to the attention of the milling fraternity, and the consequence is that, although his profits are large on each machine, yet the expense of disposing of them eats all these profits up, and by the time his invention commences to be appreciated his patent runs out, leaving him as poor as he was at the beginning. Now, were this association to employ some one well versed in milling and expert in patent law he could not only watch our interests in regard to past patents and reissues, advising us as to whom we owed royalties for valid patents, and what invalid patents to resist, but he could also bring to our attention such patented machinery as he might deem meritorious, or at least such as in his judgment we could risk testing or experimenting with. If then we found something that was of value, he could arrange to pay for it such a sum as would be a fortune to

the inventor, but would be insignificant to the individual members of such large organization as this. I dislike to repeat myself, but I made a suggestion at Buffalo and again at Indianapolis in reference to your Committee on Mill Machinery testing new inventions in milling on the different classes and varieties of wheat, raised in the different sections of the country, and if this seventh recommendation is adopted, the course suggested will be a feasible one. I know that to many of you this plan will seem Utopian, thinking that it is to your interest to keep the knowledge of such machinery and processes as you have tested and found valuable as secret as possible; but, gentlemen, you are, in my opinion, making a grave mistake, as I know many of us have found in the past three years, and if we will only be open with one another, and exchange ideas and results of experiments, we will not be confined to the United States for a market, and the light profit that competition on a limited market of necessity compels us to accept, but we will have a larger part of Europe and South America for our customers.

Already John Bull is growling over the cheapness of American flour, as compared with the raw material, and the mills of England and Scotland have seen more idle days in the past six months than they have done for years before. France, too, is getting alarmed at the cheapness with which American wheat and American flour is being furnished them, and at a convention of agriculturists held at Lille, March 25th, it was acknowledged that the cultivation of wheat at prices that have ruled the past year was unprofitable, and the convention recommended that it be discontinued in future, and that the cultivation of tobacco and the sugar beet be substituted for it. Immediately after our Buffalo convention that great authority on milling and markets, the organ of our British brethren, *The Miller*, rather severely criticised some of the remarks then made, and laughed at the idea suggested of American millers pulling together, and the United States furnishing the consuming world with the manufactured article, instead of with the raw product of our fields. It sings a different key now, as listen to this from its issue of April 14:

"The observations made in these columns lately, as to the probable extension of mills in America, and the consequent reduced chance of working profitably our own flour mills, has been transferred to our Paris contemporary, *L'Echo Agricole*, which applies the conclusion to France, and intimates, we think very justly, that American competition will probably quite as seriously affect the French milling trade as that of England. As a matter of fact the enterprise of American millers has sent commissioners, in recent years, to Vienna and other centers where the finest European flour is manufactured, and means have been followed to discover all the best methods known, in order that American mills may turn out superfine qualities of flour, that shall compete with the best known brands of Hungary, Germany and France. In England, at present, the bulk of the flour is rather more of a household character than of that sort which hotels and pastry cooks demand for the wants of luxurious consumers. At the same time, this season the ordinary American barrel flour also challenges the cheapest sacks of our Eastern Counties millers, and when, as in the past week, the imports amount to a bulk equal to 112,000 sacks of 280 lbs., the general importance of foreign competition can not be overrated. Several times lately wheat has been close upon a solid advance in price, but all efforts of sellers have been neutralized by the heaviness of flour business and consequent discouragement of millers. At the same time our English millers have resolved not to be distanced by foreigners through the want of improved machinery, and if with the present improved methods of manufacture, home-made flour shall be undersold by imported sorts, the British miller, like the British farmer, may say the issue results from the greater natural advantages under which wheat is produced abroad, rather than from want of technical skill and enterprise at home."

I claim that this Association has contributed largely to the export of flour, instead of wheat. It brought the millers of every section of the country together. It got them to drop jealousy, not only of individuals, but of cities, States and sections of country, and the information derived from such contact has been of incalculable benefit in forwarding the end for which this Association was organized—the success of American milling. As to the export business, I will refer to that later on, if time permits and your patience is not exhausted.

In the eighth recommendation of the committee there was no intention to blame or even criticize our present Secretary or Treasurer. Both have been connected with the Association since it was first organized, and both have contributed largely to its success. Our Association, however, has now got to be very large, but it still can be doubled in numbers and efficiency by the employment of some gentleman to devote the whole, or at least the larger part of his time to those objects. It can not be expected that the President, or any member of the Executive Committee, can spare sufficient time to attend meetings of State associations, or to visit the principal millers of such States as are not organized and take steps to form an association. It will also be necessary under the proposed reorganization to keep in active communication with individual members of the different associations throughout the country, to advise them of the different negotiations, suits, etc., pending, to secure statistics and other information in regard to growing crops, markets, etc., for distribution amongst the members, and a thousand and one other things that need not be specified, but for which you can all understand the necessity.

The appointment of a patent attorney, as recommended in the ninth clause, will save millers from many a lawsuit and its attendant costs and annoyances, at what will be to each miller an insignificant amount, besides the benefits to be derived, as I have already explained in speaking about section seven. He could also collate and file for future use, information furnished by members, from time to time, regarding patents as they are issued.

Although the recommendations of the Executive Committee and the Constitution for the State and National Associations were not drawn up hurriedly or unadvisedly, yet there may be some points in them that can be improved upon, in which case I trust that every gentleman will give the subject the serious attention it deserves, and either through amendments on the floor or by suggestions to the committee assist in making them as nearly perfect as possible.

It is intended that this shall hereafter be a close corporation, and what is done at this convention will doubtless govern it for ten years to come. It requires us all to be careful that every necessary point is covered, and that all that is done shall be done for the benefit of the whole of our members.

THE UNITED STATES MILLER.

While on the first of March last our membership only included 3,250 runs of burrs, or less than one-twentieth of the number in the United States, I feel confident that before another year rolls round that number will be very largely increased. Our success in the Cochrane suit has been of immense benefit to us, and many millers have since joined, paying up past assessments, many of them, I am convinced not from fear of future consequences, but from a desire to bear their share of the burden. A great many, I think, have been afraid to bring themselves prominently to the notice of those who were suing us, and a great many have failed to join us from motives of economy or meanness. They argue that if they should be sued for infringing any patented machine in general use among the fraternity, the National Association would be compelled to defend them, as should a decision be rendered against them in the Supreme Court, such decision could be used, as in the Cochrane case, to procure injunctions against our members. To a certain extent they are right, but hereafter they will be mistaken, as in cases where patents are declared valid our members can readily settle for a comparatively nominal sum, and the patentee will then have funds enough at command to make it warm for outsiders. Even in cases where we believe the patent to be fraudulent, it will only be necessary for us to watch the case, see that there is no collusion between the parties, and leave the party sued to bear the whole expense of the defense.

Grading and inspection is a subject that I must again urge you to take some action on. I know it has been of immense benefit to the St. Louis market, especially when the flour has been exported. Out of some 300,000 barrels and sacks of flour that have been shipped on through bills of lading from that city to Great Britain and the Continent, I have not heard of a single complaint in regard to grade, buyers there being satisfied to take the certificate of the Board of Flour Inspectors, as to quality, weight and condition. If some such system as that recommended by your committee at Buffalo was adopted, I am confident it would add at least twenty per cent to the amount of flour exported the coming season. Our flour exports the past year, as I think I have already mentioned, have been quite large—the amount shipped on through bills of lading from interior points being at least ten times as great as in any previous year. Freights, both inland and ocean, have been quite low for the past six months, and the railroads seem at last inclined to put the manufactured articles on a par, as to rates, with the raw material, and, at times, even to favor it. The only serious drawback at present on through shipments abroad is in reference to the powers given to the railroads at the seaboard, in regard to the shipment thence, regardless of the line or steamship named in the bill of lading. This has caused some trouble on the other side lately, on account of one steamer (the Zanzibar) having been lost. Several other steamers, not belonging to the regular lines, by which the property was to go, have delivered their cargoes in bad order. This trouble has been somewhat overcome by the insertion in the insurance certificates of a clause providing "for all the liberties expressed in the bill of lading," but even that does not entirely satisfy our customers on the other side, and the American Chamber of Commerce of Liverpool, under date of March 24, desires me to call your attention to the report of a special committee of that body, made March 18th, in reference to this matter, asking us to take some action in regard to it. This document I have referred to the committee of which Mr. Elles is chairman, and they have prepared and will submit a report on the subject. I see no reason why, with cheap fuel and large water power, cheap transportation, late improvements in the processes of milling, and first-class machinery in nearly every large mill in the United States, a bushel of wheat should leave this country except in the shape of flour. While our English friends justly ridicule the proposition of one of our Pennsylvania members, who seriously suggested an export duty on wheat, they kindly furnish us a Roland for our Oliver, in British milling interests, the taxation of American flour, while American wheat should come in duty free.

The improvements in mill machinery have been greater the past year than ever before; but, in my opinion, we have not begun to do what can be done, and that in the next year or two. I know of a great many large mills projected, the building of which has been deferred till experiments now being made have been fully tested.

In conclusion, gentlemen, let me hope that your deliberations will be as pleasant and profitable as they have been in the past, and that none of you will regret the time spent in attending this sixth Convention.

I must ask your kind indulgence for having occupied so much of your time, but as this is doubtless the last occasion on which I will address you formally, and as my position as presiding officer will prevent, to a great extent, my taking part in the debates, I took the opportunity of elaborating my views on the subjects that will come before you in this opening address.

The Secretary, Mr. Frank Little, then read the following communication from Mr. Charles Randolph, Secretary of the Chicago Board of Trade:

BOARD OF TRADE, SECRETARY'S OFFICE, CHICAGO, May 13, 1879.

To the Honorable, The President of the Millers' National Association in session at Chicago:

SIR:—I beg to inform you that the resolutions below have been unanimously adopted by the Board of Directors of this Association, and that I am directed to communicate the same to you with the request that you will do the Board the favor to cause them to be made known to the honorable and important assembly over which you are called to preside, to-wit:

WHEREAS, This Board is advised that the Convention of the Millers' National Association will assemble in this city on Tuesday next, May 13, therefore, as a recognition of the commercial importance of that body and the questions it may be called upon to consider, be it

Resolved, That the Board of Trade extends to the delegates composing said Convention its hearty welcome to our city, and expresses the hope that the deliberations of the Convention may be productive of great benefit to the special interest involved and to the commercial advantage of the country generally.

Resolved, That the freedom of the exchange rooms of this Board is hereby tendered to the delegates of the above Convention, and that the badge designating parties as such delegates be recognized as sufficient to admit the bearer to the sessions of the Board during their stay in this city.

I am, sir, very respectfully your obedient servant,
CHAS. RANDOLPH, Sec.

Mr. Little also read a letter from the State Line Steamship Company of New York City, stating that it had been understood that the next annual Con-

vention would probably be held in New York. The Company wishes to extend the Association an invitation to take a boat-ride down the harbor and bay.

Both communications were received and ordered to be placed on file.

The Chair stated that the Committee on Credentials would meet at one of the headquarters of the Illinois Millers, where members of the Association who had paid all assessments would receive badges that would admit them to all the sessions of the Convention. On motion a recess was taken until 2 o'clock.

AFTERNOON N—TUESDAY.

Pursuant to the adjournment, the Convention re-assembled at the hour appointed.

President Bain announced that he would proceed with the business of the Convention under the regular order.

Such Committees as were prepared would submit their reports.

Mr. Alex. H. Smith, Chairman of the Committee on Patents, presented the following:

Report of the Committee on Patents.

Your Committee respectfully report that during the past two years the importance of the patent business affecting the milling industry has been signally proved, and the policy of united action in defense against what are honestly deemed to be unjust claims has been amply vindicated. But it is not our province to detail the history of the litigation which has so long engaged the attention of the milling public, nor to dwell upon the brilliant success which will be remembered in milling history, but to call your attention to another and even more efficacious means of honorable self-protection which has heretofore necessarily been neglected during the exciting contest which has engrossed all our energies for two years past. Prevention is always better than cure; and while your committee recommend the continuance of the policy of united defense in the courts against patent claims which are deemed fraudulent or invalid, at the same time they take this opportunity to call your attention to the importance of united efforts to secure the amendment of the patent law so that the industries of the country may be relieved from the liabilities to unjust exactions without impairing the just protection due the inventor.

About 15,000 patents are now issued yearly, covering every branch of manufacturing industry. Hardly a process of manufacture can be worked, or a machine or tool of any kind used, which is not covered, or claimed to be covered, by one or more patents. And as the great majority of patents issued are for improvements to unknown processes or devices, the use of one process or device may require licenses from several patentees.

To a certain extent this is a necessary evil incident to any patent system, but defects in the patent law, and loose and oftentimes grossly incompetent administration in the Patent Office, have aggravated these evils an hundred-fold. We might instance numerous illustrations which will come to the minds of many millers.

The milling industry is not the only one which has suffered from this burden, and during the last Congress an earnest effort was made to secure an amendment of the patent law in several particulars, including the following:

First—Fixing a definite time within which suits for infringement must be brought.

It may surprise millers to learn that under existing laws it is very doubtful whether any statute of limitation is applicable to such suits, and that the patentee may demand his profits or damages, no matter how great the lapse of time. Such a matter should not be left open to any doubt, and a clearer case for legislation can hardly be presented.

Second—Regulating the measure of recovery of damages or profits by proper restrictions to a reasonable compensation to the patentee.

This is particularly demanded where infringement, as by millers almost universally, is innocent, and not wanton or malicious.

Third—Taxing patents after a certain number of years, so that the owners of valuable and meritorious patents may, as in the case of all other property, contribute to the support of the Government which gives them such protection, and the worthless patents, which constitute the great majority, may be wiped from the records and not remain for the sole purpose of enabling patent sharks to obtain fraudulent reissues to impose upon the public.

Fourth—Providing further salutary restrictions upon the granting of reissues.

Millers do not need to be informed of the importance of such an amendment.

Fifth—Giving individuals interested the right to institute and prosecute proceedings to annul a patent, on the ground that it was illegally issued, without being compelled to wait for the patentee to sue for infringement.

A bill embodying these and other points was carefully prepared by parties interested in the judicious amendment of the patent laws and by the advice of many of the leading patent lawyers of the country, and after long and careful consideration by the Patent Committee of the Senate and House of Representatives, it was unanimously reported by both for adoption. So wise and judicious were the amendments that they were then indorsed by the then Commissioner of Patents, and after full discussion it was passed by the Senate almost unanimously.

There appears to have been no opposition, except on the part of a few interested in perpetuating the present abuses. But when it came into the House of Representatives the session was far advanced, and, because the railroad interest had been more prominent than the other great industries in advocating the reforms of the bill, the foolish cry that a "lobby" was working for it was raised, and the session closed without action upon it.

Your committee are not advised whether this or a similar bill will be presented to the Congress now in session, by the parties who were instrumental in presenting the former, but no industry is more interested than our own in the judicious amendment and wise administration of the patent law, and your committee is of the opinion that this Association should actively interest itself by hearty co-operation with other industries to this end, by representation before Congressional Committees and by all proper and honorable means.

ALEX. H. SMITH, Chairman, St. Louis.

S. H. SEAMANS, Milwaukee.
J. A. CHRISTIAN, Minneapolis.

J. D. HAYES, Detroit.
J. A. HINDS, Rochester.

Report adopted.

Mr. Gibson, of Indianapolis, said that he noticed that Senator Davis, of Illinois had tacked on a dangerous amendment to the proposed bill, and that it would well bear watching.

Mr. Sparks, of Illinois, said that each man ought to constitute himself a Committee to watch over these patents. A man invented a gravel sieve in the days of Meteuseh, and after years had gone by, somebody reissued it, and another reissued it, and by-and-by it blossomed out as a first class middlings purifier. He thought a sweeping amendment was needed whereby the maker or vendor alone should be held responsible for infringements of patents, and that innocent purchasers should be protected. As it was the millers were swindled every day, and he for one had got tired of it.

Mr. Bradfield, of Michigan, said that they wanted honest men in the Patent-Office, at least in the Primary Examiners' Department. He instanced a case which came under his own notice, and broadly charged that money was used and put where it would do the most good. He believed that there was something rotten in Denmark.

The Chair said that, while the law now before Congress did not give them all the relief they needed, it yet acted in some measure as a protection against dishonest patents and reissues. He did not agree with Mr. Bradfield that one or two thousand dollars would sometimes go a long way in the Patent-Office, and he thought that the Primary Examiners were overworked, but not dishonest. The bill had failed principally because it was championed by the railroad road interest, and the idea got out that the monopolists wanted to defraud the honest inventor.

The report of the Committee on Patents was adopted.

Mr. Fletcher, of Minnesota, moved that the Committee on Patents be requested to draft a petition to Congress embodying the views advanced, and requesting the passage of the bill. The motion prevailed.

Mr. Baker, of Minnesota, offered a resolution requesting the President of the State Association to prepare a statement embodying the recommendations of the Committee on Patents and to forward one to each Senator and Representative. The resolution was adopted.

Mr. Nicholas Ellis, of Evansville, Ind., presented the report of the Committee on General Reference, to whom was referred a communication as follows:

AMERICAN CHAMBER OF COMMERCE, LIVERPOOL, March 24, 1879.

To the President of the Millers' National Association:

DEAR SIR: The rapid increase of business between the Western and Southwestern States of the United States of America and this port, much of which is done upon through bills of lading, has drawn the attention of the members of this Chamber to the forms of bills of lading now in use and the insecurity thereunder, and while no important losses have as yet come under their notice, they have seriously felt the inconvenience and loss resulting from irregularity and delay in shipments. The forms of bills of lading were referred by this Chamber to a special Committee, whose report is inclosed, and I am instructed to call your attention thereto, hoping that the suggestion therein made can be carried out. In addition, I have to ask whether it is not possible to secure some action by the Congress of the United States, so that no arrest of property shall be permissible in passing from State to the seaboard, and thus that an innocent holder of bills of lading may be protected in the possession of the property as represented therein against any claims that might be brought in consequence of the liabilities of shippers. No instance of legal arrest has been notified to this Chamber upon any bills of lading held by its members, but, as I am informed, the power of arrest exists, and can only be overcome by Congressional legislation.

This Chamber would be pleased if you will give these questions your consideration and favor them with your opinion upon the points now raised.

Unless greater security can be given to the holders of bills of exchange with shipping documents attached than they now possess, the present confidence might speedily be changed by a single casualty, and a difficulty of negotiation of exchange arise which would be apt to curtail a business which, in its more perfect development, it appears to this Chamber will be of immense advantage to the trade of the United States and United Kingdom.

I am dear, sir, yours faithfully.

[Signed] J. A. MARSH, President.

Report of the Committee on Through Bills of Lading.

American Chamber of Commerce, Liverpool, March 18, 1879.

The Committee appointed by this Chamber to consider the question of through bills of lading for produce from interior points of the United States and thence to the United Kingdom, have examined the clauses upon several bills of lading in general use, and find that very extended powers of shipment at the seaboard are granted to the railroad and transportation companies, which have operated, and might operate still more seriously, to the detriment of both shippers and receivers of produce, and the inconvenience and possible loss resulting therefrom are likely to be much more seriously felt in the future, owing to the introduction into the Atlantic trade of a great number of steamers in addition to those better known as the regular lines.

The point upon which the question seems to rest is the clause in nearly every through bill of lading which gives the parties issuing it, or the agent at port of shipment, absolute control of the shipment of the goods from the seaboard, regardless of the line or steamship named in the bill of lading, and thus possibly increasing the rates of insurance to be paid by consignees, and entailing upon them the responsibility of watching the arrivals of all steamships in order to recover the goods; and following this irregularity of shipment is also the irregularity of delivery, which the committee are informed frequently extend to several separate deliveries for one small lot, and from different lines as well as steamers.

These irregularities are not only inconvenient, but some cases of loss in consequence have been brought to the notice of this committee, and complaints of delay have been substantiated which

possibly arose from the same cause and from want of collective responsibilities, which the through bill of lading is deficient in, this document being signed by the agent of the transportation or railroad companies and their connections, "severally and not jointly."

The committee considered that the only point opened to the Chamber is to draw the attention of the New York and some of the internal Chambers of Commerce of the United States, to the state of things now existing, and to recommend to their consideration the desirability of annulling the clause which gives the carriers power to transfer goods engaged by a particular line of steamers to any other lines or steamers without consideration of the interests of the owners of the goods.

They would also suggest the desirability of two forms of bills of lading, the one by regular lines of and the other an open bill of lading by steamer or steamers, etc., so that the shipper could make his election; and that the railroad and transportation companies should be held responsible for any loss arising in consequence of any deviation from the terms and conditions stated thereon, and for any unreasonable delay in forwarding goods.

[Signed] JNO. A. MARSH, Chairman.
A. H. LEMONIUS.
W. M. HALHED.
S. H. BROWN.

Committee of General Reference.

The Committee of General Reference reported as follows:

Your committee to whom was referred above communication from the American Chamber of Commerce Liverpool, and the report of a committee of that body, on through bills of lading, beg leave respectfully to report that they have carefully examined the matter therein complained of, and find there is some cause for the action taken by that body. They find that foreign bills of lading issued at inland points of the United States contain a clause to this effect: "With liberty to ship by any other steamship or steamship company." This we find has worked detrimentally in few cases lately, as the large amount of goods being exported from this side has drawn here innumerable steamers, many of which are not classed as high at Lloyd's as the steamers running in regular lines. The Merchants' Dispatch Transportation Co., which are the largest issuers of such bills of lading, inform us, through their foreign agent in New York, W. H. McIlhanney, Esq., (to whom we are indebted for a great deal of information), that while this clause is put in the bills of lading, yet it is seldom they take advantage of it, and only in cases where the property arrives immediately after the sailing of the steamer of the line by which it is intended to go, and at times when the succeeding steamer, and perhaps one or two more of the line have full cargoes then engaged, and instead of keeping it on the wharves at New York waiting for an opportunity to ship by a vessel of the specified line, take advantage of the steamer first offering, claiming that thereby they are benefiting the Western shipper by giving his property prompt dispatch, and also claiming that were they to hold the property until they could ship by the line mentioned in the bill of lading, it would work detrimentally to the interests of the Western shipper, and draw orders to the sea-board cities, instead of buying direct, as the purchaser could then depend on receiving his property within a reasonable time. The argument seems to us a good one, but, as reported by the Liverpool committee, shipping by a boat inferior to the one insured would vitiate the insurance, unless proper notice was given the insurance company, and even then would cost a higher rate of insurance; but it also entails upon the consignees the necessity of watching the arrivals of all steamers at their ports in order to claim their property. Two remedies appear to us in regard to this matter. One is the insertion in the insurance certificates of the words, "Subject to all the liberties expressed in the bill of lading," in which case the transportation company would require to notify the shipper or the insurance companies of the different shipments he has made; and second, that following the clause referred to in bill of lading, ought to be inserted a clause something to this effect, "But such steamship shall not rate less at Lloyd's than the steamships of the line herein named."

Another matter complained of is the irregularity of delivery. We have ascertained that, as a rule, the transportation companies put a full lot on each boat, but during the past winter, when the roads were blocked with snow, and the property arrived in all sorts of shapes, there was an irregularity which could scarcely be avoided; and, this is a matter wholly belonging to the railroads, and as they will find it to their interest not to split up lots, we may leave that entirely in their own hands.

We think our friends across the water are unnecessarily alarmed in regard to bills of lading being signed by the transportation companies' agent "severally, and not jointly," they evidently believing that the "railroads" from the interior to the seaboard are not responsible collectively, which of course they are, the phrase "severally, and not jointly," referring to the steamship company. It has been decided by our Courts in innumerable instances that where several railroads constitute a "line" or transportation company (as, for instance, the Merchants' Dispatch Transportation Company), that any line over which the property goes is responsible for loss or damage the same as if carried on their own line. If a shipment of flour, for example, going by the companies mentioned, from Chicago over the Michigan Southern, Lake Shore and New York Central railroads, reached New York in a damaged condition, the New York Central would, we are confident, promptly settle the damage; but if they did not, they could be legally forced to do it. After a thorough inquiry amongst all our members we do not find a single case in which there had been the slightest trouble.

As to the suggestion in the President's letter about the possibility of securing some action by Congress providing for the non-arrest of property in transitu, there is no necessity for anything of the kind. The laws, we find on consultation with attorneys versed in railroad matters, are very clear as to bills of lading in the hands of innocent parties holding the property specified therein.

We should respectfully suggest that the President and Secretary be authorized and instructed to act on behalf of this Association alone, or in conjunction with other mercantile bodies throughout the country, to confer with transportation companies and procure, if possible, such action as will satisfy our friends in Great Britain. NICHOLAS ELLES, Chairman.

Ind., to Europe, was stopped and caused much trouble. He wanted the matter examined, so that no rash statements should be made.

The Chair said that he was somewhat interested in this subject, since nine-tenths of the flour which he made went abroad. He had made inquiries of railroad lawyers, and their opinion fully coincided with that expressed by the Committee. Innocent purchasers could hold as against any one.

The report of the Committee was adopted.

Mr. Gibson moved that the Chair appoint a committee of three to draft a reply to the Foreign Board, and to prepare a bill for submission to Congress, if it should be found that one was necessary, to cover the points raised. The motion prevailed, and the Chair appointed as such Committee Messrs. Gibson, of Indiana; Dunwoodie and Brown of Minnesota; Smith and Crangle, of St. Louis.

Mr. Pollock, of Vincennes, Ind., said that he believed the railroads discriminated in favor of the raw material as against the manufactured product. He had no motion to make, and simply called up the subject.

Mr. Gibson said if there was any discrimination it was because wheat came in large blocks, and railroads were glad to make contracts for 100 or 500 cars of wheat in order to keep their rolling stock in use. Millers, on the other hand, could not contract for such large lots. The railroads also claimed that they allowed a discrimination of twenty pounds to the barrel in favor of flour.

Messrs. Wilson and Chapman, of Illinois, agreed with Mr. Pollock, and said they knew of instances in which an actual discrimination existed in favor of wheat. Mr. Bradford held similar views.

Mr. Dewar, of Kansas City, said it could not be expected that railroads would carry flour any cheaper than they would wheat. And it was reasonable also that railroads should grant more favorable terms when large amounts of freight were contracted for. Millers could do the same. They would sell 500 or 1,000 barrels of flour at a cheaper rate than they would five or fifteen barrels. He thought the remedy would be to substitute cotton bags for wooden barrels. The wooden packages amounted to one-tenth of the whole weight, and he thought that the time had come when a great change should be made in packages, and that bags should be substituted for barrels, not only for shipment to Europe, but to consuming points in the East.

The Chair fully agreed. Barrels were almost useless to the receiver, but bags could be put to a variety of purposes. There was a saving on freight amounting to one shilling (25 cents) per bbl. on shipments to Europe in favor of bags.

The subject then dropped.

The Chair called up the question of marks and brands. At the Buffalo Convention this subject had been discussed, but nothing had been done at that time. He understood that a Cincinnati man was preparing a book of brands, and he thought each member of the Association should hand fac-similes of his brands to this gentleman.

Mr. Dewar moved the appointment of a committee of five to prepare a circular to domestic purchasers of flour, asking them to formulate their views in regard to the use of bags instead of barrels. The motion prevailed, and the Chair appointed as such Committee Messrs. Dewar of Kansas City, Atkinson of Kansas, Burbridge of Illinois, Baker of Minnesota, and Pollock of Indiana.

A recess was then taken until 8 p.m.

EVENING SESSION—TUESDAY.

At 8:45 the Convention was called to order. Mr. Bain stepped to the front and said he would like to have Mr. Fletcher, of Minnesota, take the chair. Mr. Bain's father died at Yorkville, Ills., this afternoon, and the funeral comes off to-morrow, and he had therefore to take leave of the Convention and would return to-morrow. Meanwhile Mr. L. Fletcher, of Minnesota, would occupy the chair. If you adjourn before I return I desire to thank you for the very kind manner in which you have treated me during the past five years. I trust my successor will be treated as you have treated me. I am very sorry that this should have occurred. Mr. Fletcher took the chair, and in his call for reports of committees, Mr. David Gibson, of Indianapolis, Chairman of the Committee on Mill Machinery, requested that Mr. Stanley, of St. Louis, read the report of the committee which was as follows:

Report of the Committee on Mill Machinery.

The Committee on Mill Machinery beg leave to submit the following:

The subject is so vast in its scope and details that it will be impracticable to give anything but the merest outlines in a report of this character. While in the last eight or nine years there has been a complete revolution and a wonderful improvement in the manufacture of flour, I believe that as far as cleaning the wheat, grinding and bolting it is concerned, there has been no material change in the general principles and construction of the machinery for performing these operations since the days of Oliver Evans; but many important changes and improvements in the details of each and all of them.

The inventive genius of the country seems to have spent a good deal of its force on this class of machinery, and the result is a large number of apparently perfect machines for this part of the work, separating all kinds of impurities from the wheat by screening, blowing and suction, and as far as this goes the work appears to be perfect, and nothing better needed than several machines now accomplish. When it comes to scouring the wheat after it has been separated from foreign matter, that appears to be a more difficult problem, and one yet not solved in a satisfactory manner, though there are several machines that come very near doing what is wanted in this direction. Scouring ma-

chines that will completely divest the wheat berry of the furze or fine hairy beards on the small end of the grain, act so harshly on the bran as to chip it and weaken it, and cause it to be ground up into such fine particles that it passes through with the wheat flour with the first bolting, and injures both the strength and color; but if we had machines so perfect as to thoroughly scour the outside of the berry without breaking the bran, then we have the crease or depression lengthwise of the berry, which always contains a large amount of dirty, dark matter, very injurious to the flour, part of which is removed by brushing and the other operations of cleaning, but as far as we know there has not yet been made any cleaning machinery that perfectly meets this difficulty, and the solution will probably come in some other method of treatment, say in what are called ending stones or breaking stones, which at once remove the furze on the end of the berry, also the germ and a part of its covering, all of which are deleterious to flour, or it may be that a new class of machines will be produced for this work. In fact, I am informed that they are now being manufactured and tested with good promise of success. If gradual reduction can be accomplished in some simple way it will check the present strong tendency which now exists to adopt the elaborate and complicated Austro-Hungarian system, and solve the difficulty even better than ending-stones. I hope this may be so. As to grinding or granulation, great changes in detail have been adopted, but none in the general principles, as far as we know. It seems to have been demonstrated that slower speed of burrs, less face, and more furrow, and much less quantity of work in a given time, is the better way. The use of rolls for preparing parts of meal, where good and inferior parts of grain are intimately mixed together, for separation, has proved a great success, doing this class of work much better than it has been done with burrs, or in any other way. In fact, rolls have proved so successful for many purposes in granulation that they are rapidly coming into general use, and to some extent superseding the use of burrs. The great revolution which has taken place in our milling has been made practicable by the introduction of middlings purifiers. Without these very little progress could or would have been made. With their use it has become practicable to make clean, pure, perfect flour out of the middlings that previously were made into an inferior grade, or were sold for animal food. The fact of being able to make much better flour out of middlings than from the first grinding, set all millers to work to find ways and means to turn as large a per cent. as possible of the wheat into middlings. This brought about high grinding, and in hard spring wheat districts an approach to the gradual reduction practiced in Hungary, and to some extent in Germany and Russia, and in the winter wheat districts gradual approach is being made to something like the *mouture économique*, or economical system of milling practiced now, and for many years past, in France. Both these systems have produced wonderful results in Europe, and have already done so here, and with the additions and modifications which we will give to perfectly adapt them to our circumstances, the results will be much greater.

Our improved system of flour making, which has added at least 10 per cent. to the value of every bushel of wheat grown in our country, and enabled us to compete successfully with the French and Hungarians in the markets of the world and with the English and German millers at their own doors, has been brought about by the introduction of middlings purifiers, and our continued progress in this direction will make it necessary that these important machines shall not be controlled by a monopoly, but that millers shall be able to buy of any and all honest inventors and manufacturers. But to come back to the main question of mill machinery; it is not at all difficult to get good machinery for the principal parts of a mill. The difficult part after all, is its arrangement and organization and the carrying out of details. To do this requires the owner to have a general knowledge of the business and to know what he wants. A mill constructor who knows a good deal more than mill owners generally do, and last but not least a competent miller to run the mill, these can all be had, but they are not so very plenty as to be picked up always when you need them, and mistakes in building and running flour mills some of us know are very expensive. This leads me to say that we need a new class of skill in manufacturing flour, which I regard as a fine opening for our young men and boys. A combination of practical and scientific knowledge of the art of milling,—the only way I see to get this is for young men to first learn the trade in a mill and then acquire a thorough scientific knowledge of milling and mill building by a course of study in some of our schools of technology; or what may be better, at the millers' college, when established. We have now many scientific mill constructors and very few scientific millers, while latterly scientific milling has become the most important of the two. CHAIRMAN.

The miller who has devoted his whole time to the daily routine of the necessary details of his own business which it requires, has been unable to follow the successive steps that have led to the gradual improvement that has taken place in the best arranged, and the most successfully and profitably conducted mills in the country, and although the gentlemen owning and operating those advanced mills very kindly throw open their doors for the inspection and gratification of their brother millers (and even going as far as to explain the uses and advantages of the various new machines and improved machinery in operation in their mills) who may desire to also improve their mills and their products, yet it is just a simple impossibility for any of these inquirers after the truth of milling to learn anything that will be of much value to them, in making those changes they desire to make, to improve the quality of their flour. They may think they have caught an idea or two, that they can themselves put into practical operation, and they may determine to adopt it at once; immediately some very much advertised, and some very much improved machines are ordered; some carpenters, and perhaps some millwrights, are engaged, a few weeks are employed in getting ready, and then a stop of a week or more takes place, to get everything adjusted; the mill is again started, but alas! after all this expenditure and loss of time, it is found there is no improvement, and in some cases matters are made worse and have to be put back as before. This experiment may have cost a thousand or \$1500. Another year rolls round; some other change must be made; the same experience follows, as much time lost, as much expenditure, with no better result, and so it goes on from year to year, a great deal of vexation experienced, a great deal of money expended, and entirely fruitless of any real improvement, in the grade or quality of flour manufactured. It would be an easy matter to write an article on improved machinery, but even the most

intelligent miller, desiring to improve his mill, could not take one of these papers and base his designs upon any of them and improve his mill, and give him more satisfaction than it did before. This matter of old style, and new style milling cannot be compromised, by part one, part another; the change must be radical and thorough.

And the only thing really for the miller to do, who desires to make the change, or in other words, remodel his mill from an old to a new process mill, is to put himself into communication with one who is a thorough practical millwright, and draughtsman, and, if possible, who also combines a practical knowledge of milling, state his wishes to him, and leave the matter in his hands, and he may then rest assured, that whatever is undertaken, will be done as it should be, and the result will be a New Process Mill in every sense of the word, and the avoidance of mistakes, which the mere practical miller of forty years experience could not avoid.

D. E. ROBERTS.

In conclusion, as this subject is so important, this Committee would respectfully offer the following resolution, to wit:

Resolved, That the Committee on Mill Machinery be appointed for the ensuing year be instructed to use all efforts to obtain full information concerning any valuable improvements in any branch of Milling Machinery, and report in detail to the next Convention, and that the members of this Convention are earnestly recommended to give this Committee all possible assistance by informing them of the exact result of any successful experiments that may come under their observation.

Respectfully submitted,

THE COMMITTEE.

The report and resolution were adopted.

Mr. J. C. Q. Burbridge, of Alton, Ill., introduced the following resolution.

WHEREAS, Judge Dyer, of the United States District Court of Milwaukee, has lately decided that the law for the registration of trade marks is unconstitutional, and WHEREAS, The milling interests of this country demand the passage, by Congress, of more stringent laws for the protection of the Miller's flour brand; therefore,

Resolved, That we, the Millers, assembled in National Convention, do hereby petition and recommend to Congress the passage of a law compelling every manufacturer to brand every barrel of flour shipped from his mill, the name of the firm, place of manufacture, and the date. Also that said law be so framed as to punish any person or persons that shall scratch from the head of the barrel of flour the name.

Resolved, That a Committee of five be appointed by the President, whose duty it shall be to take charge of this whole question, and frame a law for an early submission to Congress, that will carry out the foregoing resolutions.

Mr. Burbridge spoke at some length in support of his resolutions. He claimed that under the present system there was no protection for honest millers, and that brands were practically worthless. Congress had power to make the distiller and tobacco manufacturers place their names upon all packages, and to punish any man who removed the brand, and he believed it had the same power with regard to flour. Eastern buyers dictated to Western producers what brand they should put upon their barrels, and unless they got what they wanted they would not buy the flour.

Mr. N. Elles, of Indiana, thought his friend from Illinois got too much excited over this matter. The Government made the whisky and tobacco men stamp their packages simply in order to trace up the packages for the purpose of collecting the revenue. This did not apply to flour, upon which there was no tax, and he thought there was no occasion to ask for the desired legislation.

Mr. Heermans, of Chicago, agreed entirely with the last speaker, and thought it was not within the province of Congress to force millers to brand their flour any more than to compel cloth makers or cotton-spinners to mark their goods.

Mr. F. Schumacher, of Akron, O., thought the gentleman was mistaken as to the effect of Judge Dyer's decision, and reminded him that the common law protected trade-marks as heretofore.

Mr. Homer Baldwin, of Youngstown, O., thought it did not matter near so much what they put outside the barrel as what they put inside.

Mr. Sparks, of Alton, Ill., said that he had a brand, a simple letter, for which he would not take \$5,000.

Mr. Burbridge briefly replied, claiming that the remarks of those who had opposed his resolution only convinced him that they were offered at an opportune moment, and should be adopted by the Association.

On motion of Mr. Heermans, the resolution was laid on the table. The Convention then adjourned until 10 o'clock Wednesday morning.

SECOND DAY—WEDNESDAY, 10 A. M.

In accordance with Tuesday's arrangements Mr. Ed. Sanderson, of Milwaukee, was to preside over the meeting. Therefore, at 10:15 Mr. Fletcher introduced Mr. Sanderson, who said:

"Gentlemen of the Convention, at the request of Mr. Bains, your President, I consented to call this meeting to order this morning and if possible to preside over the matters that might come before it, but I find that I have some business that I cannot neglect this morning, and Mr. Fletcher has kindly consented to take my place."

Mr. Fletcher called the Convention to order. The first order of business was the report of standing committees.

Mr. W. P. Brown, of Minnesota, Chairman of committee, read the following report on grain for milling.

Report of Committee on Grain for Milling.

Your Committee on Grain for Milling would respectfully report that we have carefully considered the subject and find that it embraces a wide field for argument. So varied are the opinions expressed on the subject by millers in different parts of the country, that the report should be made of opinions of millers from different localities or States, as what is regarded favorable in one locality is not regarded in others. For your committee to recommend any one variety in preference to all others might seem egotistical, and we can only recommend several as among the best or most desirable for milling; trusting the importance of the subject will induce a thorough discussion by the Convention, believing such discussion will furnish more information than

any report we may make. We deem it of the greatest importance to millers everywhere to do all in their power to furnish the farmers in their locality with the best seed wheat, thus enabling them not only to change their seed, but to introduce the most desirable varieties, and to furnish it to them at as low a price as location and circumstances will permit. And we feel certain if such a course is pursued, in two or three years the improvement in quality and kind will astonish the most sanguine. We are of the opinion that, as a rule, millers do not pay as much attention to the kinds of wheat they buy to manufacture as they ought, and if they would use more caution in buying, rejecting that which damages their flour, and by discrimination in price, induce the farmer to raise only the desirable varieties, the importance of using only the best kinds for flouring would be more fully realized, and each miller would bestir himself to aid and induce the farmer to procure good seed, and that, too, at as low a price as it can be procured. One hindrance to this object is the shipper, as he will buy anything that will pass grade, and if a farmer finds he can raise a few more bushels of a poor variety, he is apt to sow that, as he thinks it will bring him more money than to raise a desirable kind. But if millers will persist in not using the poorer qualities, they will effect such a change as will be most desirable.

W. P. BROWN, Chairman.

In naming varieties most suitable for milling would suggest in winter wheat the red-bearded wheat, viz: Lancaster or Red Sea, Mediterranean, amber, straw, &c. Mr. James Gordon of Sparta, Ill., says the red-bearded wheats are the best; the white varieties they do not want, as the flour from the latter is soft, weak and yellow. He gives his preference to the Lancaster or Red Sea. Having taken a good deal of pains to introduce new varieties of seed wheat into his locality, he finds the Lancaster the best. He thinks the yield of flour is not quite so great, but the flour is stronger and whiter, and better suited to the bakers' trade. Mr. Gordon reports it as his opinion that the soil and climate of Southern Illinois is favorable to that wheat as it makes a better flour when ground there than it does procured from other States. Millers should keep experimenting with the different varieties, thus ascertaining which is best suited to his locality, and when the most desirable variety is found, make it an inducement to the farmer to raise that over any other kind. Mr. Gordon is experimenting with "hard Scotch fife," from Minnesota, as a winter wheat, and has his second crop now growing; it looks well and he thinks it will do well, also with a Canada wheat said to be midge proof, and we may hope to hear the results of his efforts at our next meeting. In the spring varieties the fife wheat is the most desirable, although "Canadian club" and Lowland Scotch have good reputations. Bearded and soft varieties of spring wheat have no reputation, and millers of spring wheat do not want them. Much more could be said on this subject, but it would be only the opinion of two or three, and we earnestly hope a thorough discussion of the subject by this Association will give us the benefit of the opinion of many. Respectfully,

JAMES GORDON,
Committee on Grain for Milling.

Mr. Nicholas Elles, of Indiana, said that in the last year, or since this question of the proper kind of wheat had come up, they had taken a great deal of pains in introducing different kinds of wheat seed suitable to their climate and country, and best adapted to the manufacture of flour. He thought if every miller would go to a little trouble that in three years time they would have all Mediterranean wheat in their part of the country, as that was considered the best wheat for flour. They had a great deal of Fultz wheat, and they found that it makes nice wheat flour, and have been successful in getting large yields. He urges millers to make it a business to endeavor to introduce good seeds, and thought they would not have any trouble in getting what they wanted.

Mr. Williams, of Minnesota, suggested that the millers should urge farmers to make the change gradually.

Mr. Sparks, of Illinois, said that they had their ups and downs in his vicinity. They had lately introduced Fultz wheat. He said it was very deceptive, very beautiful to look upon, and every farmer was pleased with the yield he got, but after a trial the millers had been convinced it was not the wheat they wanted. The middlings are too yellow and the patent flour would hardly pass as nice flour. He approved of advising farmers to sow seed wheat of every variety.

Mr. Baker, of Minnesota, asked if they had ever tried Theiss wheat from which the celebrated Hungarian flour is made. He was on a visit to the Old Country recently, and to his mind the flour from said wheat is superior to any produced in this country. The quotations on Hungarian flour range in excess of our Patent Flour in the Liverpool markets. It takes its name from the River Theiss. It is of a dark amber color. He was perfectly ignorant of the value of winter wheat, not being a winter wheat miller, and, further, having the good fortune not to be early educated as a miller. [Laughter.] He brought some of this Hungarian wheat home with him, and if it succeeds in standing the climate of Minnesota he would be pleased to report at some future time to the milling fraternity. The climate where it is grown in Hungary is very similar to Wisconsin, Iowa, and possibly Southern Minnesota.

Mr. Gordon, of Illinois, looked upon the matter as very interesting. If the miller does not get good wheat he cannot expect to make good flour. He thought the millers should encourage farmers to raise various kinds of wheat. The farmers in his part of the country were willing to try new wheat. In 1875 he renewed the old Lancaster wheat. The Lancaster and Mediterranean, he said, were two different kinds of wheat. He imported the same year Mediterranean wheat from Delaware. They named it Red Sea wheat in his county on account of its color. The same year he imported a wheat from Ohio, from his friend, Taylor, of Londonville, who calls it amber. It is a kind of wheat similar

THE UNITED STATES MILLER.

to Lancaster and makes excellent flour. He was also experimenting in Scotch Fife wheat. It is considered the best wheat for making flour they grow.

Mr. Colton, of Ohio, said that in his vicinity they could not induce farmers to raise the kind of wheat they (the millers) wanted. They wanted to raise wheat they could make the most profit on.

Mr. Atkinson, of Kansas, said the Fultz wheat had taken precedence of all wheat in his State for the present. It sells well and yields well, and no wheat in the market sells higher at the present time. He is a farmer as well as a miller, and he had been experimenting with Fultz wheat this year. He has sown some this year. It is a very good wheat. The May and Walker wheat stands well with them. In their State they sow largely—from one to a thousand acres. They have to sow varieties that they can harvest one after the other. They find the Walker, May and Fultz work well, and the Clawson comes a little late.

Mr. Bradfield, of Michigan, wanted a wheat for Michigan that could be a substitute for the Clawson. He said Clawson was the poorest wheat raised in Michigan. The Clawson wheat will yield from 30 to 50 bushels to the acre, while Mediterranean and other varieties would yield about half as much. The millers want to throw Clawson wheat to one side in Michigan, in favor of some variety more suitable for milling.

Mr. Edmund Norton, of Chicago, Chairman of the Committee on Grading and Inspection, stated that the committee had made no report as a body, and that therefore the following contained his own views, only. He then read the following:

Grading and Inspection.

The question of the inspection and grading of wheat in our large markets is one which greatly affects all of the country tributary to those markets either as shippers or purchasers, the inspection standing between the producer and the consumer, and establishing a fair comparative value of the grain so inspected. The present system of inspection is the basis upon which the whole production of the country is sold, and the only system adequate to the immense crops that have each year to be handled; and it is of the utmost importance that grades should be adopted so as to express as nearly as possible the quality of wheat so graded. In this respect the inspection of the Chicago and Milwaukee markets does not meet the requirements of millers dependent upon these markets for supply. Each grade is made to embrace too great a latitude in quality, and embraces wheat varying largely in intrinsic value, so that the designating grade does not enable the miller to judge either as to the quality or variety of the wheat purchased. The present crop, varying largely in quality and price, has stimulated a business very prejudicial to the interests of millers, and apparently of no benefit to any one except to those engaged in it. In reference to the practice of mixing and scouring wheat: So general has this practice become that very little wheat below the grade of No. 2 reaches this market that has not paid tribute to the scalper, and should the shipper by chance send any wheat that has not been graded down to the very lowest point that the grade for which it is designed will allow, there are plenty of doctor-shops, both here and in Milwaukee, with plenty of screenings on hand to put it up in good shape to go into store, to be delivered to the innocent holder of the receipts, who might naturally expect to get a fair average of the grade for which he has paid.

The patent leeches who prey upon the milling industry are no worse than the scalpers who prey upon the quality of the wheat which ultimately comes to the miller to grind. They are worse than the speculator, who, though frequently creating a fictitious value, do no injury to the wheat in which they trade; but the scalpers aided by a system of inspection requiring only a weight test on the lower grades, is enabled by mixing and scouring to obtain this weight and grade, although actually depreciating the value of the wheat for milling purposes; for I hardly need suggest to you that wheat badly scoured is worse than if not scoured at all. It breaks the fibre of the bran and puts a fictitious appearance on the face of wheat that has not the real merit to carry its good looks. There are seasons of the year when the crop is moving freely, that the scalpers have more wheat than they can handle, and a portion of it reaches our market undefiled by the scalper's touch, and for a time we are able to obtain wheat in its original purity. What does not find a ready sale by sample goes into store to be mixed later in the season with wheat which, although called by the same grade, is very much inferior in value. A large portion of the wheat raised last year in the Northwest, especially Southern Minnesota and Northern Iowa, was rejected beyond redemption, the same causes affecting all of it in about the same degree, and no system of screening out a portion of and scouring the balance can add anything to its quality for milling. I cannot better illustrate the extent to which this practice obtains, or its evils, than by reading the following letter to Mr. John A. Christian:

Office of H. Williams & Co., Merchant Millers, Houston, Minn., April 28.

JOHN A. CHRISTIAN, Esq., Minneapolis—*Dear Sir*—Allow me to call your attention to a matter which is affecting the interests of millers in this part of the State almost to the extent of shutting their mills down. I refer to the process of scouring the wheat, so that, subjected to a weight test only, it is made to appear from one to two grades higher than it really is. It would hardly seem probable that a trick so transparent could go far unless Boards of Trade exist for the purpose of promoting speculation rather than legitimate business. But the facts seem to conflict with the probabilities, for although this business has been going on in this part of the State since early in January, and has for some time been general in Southern Minnesota, Northern Iowa, and Wisconsin, I have not been able to learn that any official notice has been taken of it either in Milwaukee or Chicago. Of course, scoured and unscoured wheat cannot for any great length of time move in the markets subject to the same rule of inspection. The Southern Minnesota millers are asked six cents a bushel premium for unscoured wheat, as it is worth that to ship, showing that, although the Milwaukee grades, as established at the beginning of the movement of the crop, were based on unscoured wheat, the basis of inspection it now scoured wheat. If this state of things has no

reached New York yet, wheat-dealers evidently expect that it will, for I learn that a firm recently paid Milwaukee price for 45,000 bushels on the river, expecting to make the freights to Lake Michigan by doctoring in the Green Bay elevator.

It is reported that the Milwaukee elevators now have machinery for doctoring, and that private warehouses have been fitted up with such machinery, and that wheat has been taken out of the city, fixed up, brought back, and resold at a profit. I also learn that farmers have learned the sharp practice, and have purchased scourers and are using their threshing-machine horse powers to drive them with. So the matter seems to stand at present, and terms as applied to grades have but little meaning, as no distinction is made between scoured and unscoured wheat, although, other things being equal, the difference in value would be from four to ten cents a bushel. I do not know if the nuisance has reached you, but it will be a wonder if you do not have to buy wheat against competitors who make use of it.

No doubt it is much easier to point out the abuse than to suggest a remedy. Still, I think if millers can be thoroughly posted, and buy their wheat with a full understanding of what has been done to it, and of the relative value of wheat in the two conditions, subject to the same test, that prices will in time adjust themselves to the new conditions.

I fear, however, that millers may not get sufficiently posted on this crop, unless the whole matter shall be well aired at the National Convention, where there will be representative millers from all parts of the country. The millers hereabouts think the National Convention can do much towards bringing about a wide-spread discrimination against scoured wheat. I will not weary you with a consideration of objections to scouring wheat before it is to be milled, or to scouring it on wrong principles, or by wrong methods, matters of great importance to be considered in the proper place.

I should be pleased to hear from you with reference to this matter, and would be glad to learn that you will have it brought before the National Convention. Yours truly,

H. WILLIAMS.

In regard to winter wheat, it seems proper that wheat raised in points far remote from each other, and varying largely in value for specific purposes, should have a different designating grade, and that wheat from Missouri, Kansas and Wisconsin meeting in this market should not be classed under one general grade of No. 1, 2, or 3 winter wheat, thus discriminating against the better varieties in favor of the poorer. As expressing the above views, I offer the following resolutions:

Resolved, That the Millers' National Association in convention assembled hereby represent to the Boards of Trade in the Northwest that the present system of inspecting wheat is stimulating and protecting the practice of mixing and scouring wheat, thereby reducing the quality to the minimum point allowed by the rules governing each grade; that such scouring and mixing tend to injure the wheat so manipulated for milling purposes; and that we urge upon them the necessity of taking such action as will remedy this evil.

Resolved, That it is the sense of this Association that the system of inspection by test weights should be discontinued on all grades below No. 2, and that a system based upon its value for milling purposes be substituted and that all wheat that has been scoured should be reduced thereby one grade.

Mr. Metzl of Milwaukee, called up a resolution which he had handed in as follows:

WHEAT. Most of the wheat shipped to the markets of Minnesota, Wisconsin, and Iowa undergoes the process of "scouring," so as to increase the weight and secure the inspection of No. 2 for a grade of wheat which otherwise would be graded No. 3, and even rejected, and by the process of scouring, the shipper is enabled to mix a certain amount of screenings into the wheat and still make the latter hold the requisite weight, and as said process is a serious grievance to millers who are obliged to buy their supplies from elevators, therefore be it

Resolved, That this Convention pass a resolution urging the respective Boards of Trade to establish a separate grade of all "scoured wheat," and cause the respective elevators and warehouses to issue special receipts for such scoured wheat, which receipts should not be considered "regular" on delivery of wheat, except when so specified at the time of sale.

The report of the Committee and the resolution of Mr. Metzl were then adopted.

Secretary Little read the following letter from Mr. Frank Chamberlain, Chairman of the Committee on Millers' School or College:

ALBANY, N. Y., April 26, 1879.

FRANK LITTLE, Esq., Secretary Millers' National Association, Kalamazoo, Mich.—*My Dear Sir*:—I am in receipt of your communication of the 15th, certifying to my appointment as Chairman of the Standing Committee No. 10, and notifying me that the next annual convention of the N. M. A. will be held in Chicago, May 18, 1879.

I desire to express to you, and through you also and especially to President Bain, my warmest thanks for so many unvarying acts of kindness.

I regret that, judging from present indications, I shall be able neither to attend the meeting referred to, nor to make a report setting forth a well-matured and defined plan, telling where, how and best can be realized the Millers' School or College. I have thought, talked, and with parties abroad as well as in this country, corresponded much upon the subject, and the project seemed to meet with very general favor. It is my deep and earnest conviction that this institution should be established in the West, in connection with some university or college, where its students may learn practical milling, and at its highest estate at the time. I am assured that there are several institutions of learning with which favorable arrangements can be made, provided a certain number of students can be secured, and near where are some of the best mills in this country. Untoward circumstances prevented me from doing what perhaps I otherwise would have done.

Respectfully yours, FRANK CHAMBERLAIN.

The Committee on Milling and Improved Methods was called on by the Chairman to report, but by request, further time was granted.

Mr. Burbridge, of Illinois, asked that the resolution regarding the branding of flour, that was voted to be laid on the table the night previous, be again brought before the Convention. A vote was taken which decided that they should not take it up.

Mr. C. H. Seybert, of Illinois, Chairman of Committee, read the report of Committee on State Organizations.

Report of Committee on State Organizations.

Upon a careful survey of the milling industry of this country, one fact will strike the observer forcibly—that is, the utter lack of sectional interests. In the milling business there are no State boundaries—no Mason and Dixon's line to separate hostile factions—no mountain ranges, water-courses or climatic changes divide the milling fraternity into warlike tribes, whose self-interest and self-preservation

demand jealous warfare against each other. The milling industry of this whole country presents perfectly homogenous elements; our interests are identical East or West of the Mississippi river, in the winter or spring wheat country, whether our mills are driven by steam or water-power. The misfortune befalling one section of the country make the influence felt in other parts; the progress and advancement of one region eventually rebound to the common good. Aside from the healthy and perfectly legitimate competition and rivalry between the different milling centers, there is no more dissension and discord than on board of some ocean steamer, where there are thousands of bags of patent spring wheat flour ranged alongside the rows of St. Louis fancy and Michigan white extras, peacefully sailing along for European ports, on whose piers they will meet their kindred from California and Oregon. We even cross the equator in perfect harmony. This world is large enough for us all—at least for the present milling generation.

We really have no conflicting interests; they are identical, and so are our adversities. Nature chastises us with drought or flood, with bugs, worms, rust, smut, weeds, and all the numerous ailments which wheat is heir to; while railroad pools, freight discriminations, patent re-issues, infringement suits, grain inspections, elevator iniquities and similar plagues, afflict us on the Pacific shore, on the broad Western prairies and on the Atlantic slope.

Can any one estimate how much the millers of this country by judicious co-operation will accomplish in advancing their interests and in ridding their business of the drawbacks, vexations and impositions now heaped upon it? Your very presence here demonstrates that our Association, though we hardly as yet have become acquainted with each other, has already accomplished much good, and that you are convinced much greater results may yet be obtained.

We acknowledge, without a dissenting voice, that a thorough organization of all the millers all over the country is not only desirable, it has become necessary, and is perfectly practicable. There may be differences of opinion in regard to the mode of organization and to the extent of it; however, as the sole object of the Association can only be the common good, to the utter exclusion of all personal aggrandizement, this probable difference should readily be adjusted. We must have a thorough organization extending to all sections of the country; it must be of uniform character, tempered slightly only by the immaterial local influences; our State and Territorial force, no matter how scattered, must find a ready point of concentration in the Executive Committee of the National Association. This can only be accomplished by a certain degree of discipline, by certain binding rules and regulations, which should be exactly alike in all the different States and local organizations. Individual independence, the personal free will, so dear to every one, is thereby not endangered, the obligations which this Association demands of you are no more than what your sense of honor and fairness will dictate to you.

Some of the States like Minnesota and Missouri, have reorganized and remodeled their constitution in conformity to the demands of the present time. Other States will soon follow, and we consider it of the utmost importance to have uniformity of State laws, at least on all matters bearing on the relations to the National Association. The main points are the length of time to which each member has to bind himself and the conditions of the withdrawal, the maximum amount of assessments per year, the amount of damages a member will have to pay, if he sees fit to compromise a suit for infringement of patent, which the association is defending for him, and the general power intrusted to the executive committee. After a thorough, painstaking consideration of the subject, we do heartily recommend all the different States to adopt the constitution of Minnesota and Missouri *verbatim et literatim*, and we do hope with the same spirit of enthusiasm and devotion these two States have so gloriously evinced in times which tried the millers' souls. Nothing short of such a legal basis will endow the association with the requisite cohesiveness. Nothing less will convince those birds of prey, who are now circling over our heads ready for a swoop, that we are no booty for their talons, and that they must content themselves with those silly birds who are straying outside of our inclosure.

In reorganizing your State association select for your presiding officers and for members of the executive committee your very best men, whose names are untarnished, who will be true to themselves and to you, whose life experience has given them ripe judgment, and who have yet retained sufficient physical force to fulfill the duties of their office promptly and thoroughly. Your Secretary must be a worker; not a mechanical scribe, but a man who puts soul into his work—an enthusiast, if you are minded to call him such. Your Secretary must consider it his mission to advance the interests of his brother millers, and he must pursue his work with apostolic faith and zeal. If you elect such a man for that office, he will do more toward developing the full strength of your association than any other agency; he will infuse public spirit into the most recluse and selfish; he will disarm distrust; he will brighten up the most dusty miller. In one word, your success as a local organization depends largely on the selection you make for your Secretary.

The National Association is the edifice, of which the State Associations form the component parts. If your State Associations are healthy and strong, the National Association will be a fortress, impregnable to all attacks; if your local organizations are weak and sickly, the National Association will be founded on sand, an easy prey to dry rot or to the machinations of schemers, "consolidated" or otherwise.

C. H. SEYBERT, Chairman.

The Chairman asked if anybody wished to discuss any of the points. There being no answer, the report was put to the vote and carried unanimously.

Mr. Brown, of Minnesota, moved that the Convention adjourn till 9 o'clock to-morrow morning. Carried.

Sailing o'er the Lake.

[At two o'clock the corridors of the Grand Pacific Hotel were crowded with members of the Association bent upon enjoying the excursion, notwithstanding the inclement weather. Mr. Edmund Norton, of the Reception Committee, mounted a chair in the roundabout and notified the expectant crowd that carriages were at the door to convey them to the Goodrich dock. Nine of Parmelee's omnibuses conveyed all who desired to make the trip, to the dock, where the steamer Alpena, of the Goodrich line, was in readiness to receive them. There were

many grave doubts expressed as to the state of the water outside, a rumor having gained credence that the breakers were rolling pretty strong. Notwithstanding the equally Northeast wind, there were no cases of literal back-out, the excursionists had evidently determined to go. After some delay, occasioned by incoming vessels, making it impossible for the steamer to get through the straight cut and out of the harbor, all hands were piped aboard, and, to the music of Johnny Hand's band, the Alpena struck out boldly for deep water. There was quite a sea on, and expectation was ripe as to possible sad consequences of the rolling and pitching of the vessel. No extreme cases were noticed until the crib was reached, when the few ladies in attendance were suddenly stricken with a desire to be on terra firma, or some equally convenient place where their sorrows might not be witnessed by a heartless and unfeeling audience. The captain exhibited excellent judgement by returning to port so soon, as it was evident that not a few musty millers were at the point of imitating the action of the historical whale which swallowed Jonah. To Messrs. Edmund Norton and S. S. Chisholm, members of the Reception Committee, is largely due the success of the excursion. Both these gentlemen were unremitting in their attentions to the wants and creature comforts of all on board. An excellent lunch was provided, with its attendant features of wine and other drinkables. The Oriental Quartette, composed of Charles Smith, C. C. Phillips, C. F. Noble and F. F. Booth, added much to the enjoyment of the trip by their excellent and well-rendered selections. It was the general opinion of the excursionists that the trip was an immense success, which cannot be attributable to propitious weather, but to the efforts of those under whose immediate charge had been placed the successful fulfillment of the programme. Upon the return of the steamer the jolly and satisfied millers were met by carriages which conveyed them to the hotel.]

EVENING SESSION—WEDNESDAY.

President Bain having returned, an informal session was held to consider the proposed new constitution.

The Convention reassembled at 8 p. m. the President, Mr. Geoage Bain, in the chair.

Mr. Alexander H. Smith, of St. Louis, read the proposed new constitution for the Association, as prepared by the Executive Committee.

Mr. Baker, of Minnesota, moved that the constitution be adopted as a whole.

Mr. Green, of Wisconsin, said that as it was provided that the State should elect the Executive Committee, the Association would be without such Committee until the State organizations were completed. To meet this he proposed that, if the constitution was adopted, the Chair should appoint five persons as an Executive Committee, to serve for the ensuing year.

Mr. Snouffer raised that point that copies of the constitution had been promised to each delegate, and that these could not be ready until morning. Moreover this was only a called meeting, it having been understood at noon that an adjournment had been taking until 9 o'clock this (Thursday) morning. For this reason, many members were probably absent, and as this was the most important business before the Association, he moved that further action on the constitution be postponed until the morning.

The resolution of Mr. Green was adopted, and further action was deferred as proposed.

Mr. A. H. Smith then suggested that the constitution be read and discussed informally.

The Chair thought this a good idea. There were a good many gentlemen present who were just aching to get in amendments, and it would give them a splendid opportunity to get off their gas. [Laughter.]

The Convention accordingly proceeded to discuss the details of the proposed instrument, which was read by sections.

At this point George Harding, Esq., the eminent patent lawyer, was introduced to the Convention and made a speech. It was a pleasure, he said, to meet clients after winning a suit; it was not quite so pleasant after losing a case. [Laughter.] When he had undertaken the Cochrane case for his clients he had studied the milling business and continued its study for a year and a half. The more he studied the subject, the more he was impressed with the large amount of brain it required to run an American mill. It was a cause of congratulation that the three judges before whom the Cochrane case was tried should have heard the six days' argument and decided favorably for the Association. In the matter of appeal to the Supreme Court, the speaker thought the members need not be anxious, believing that the result would be highly favorable. His last speech on the patent matter had taken six days, and he was afraid if he began on this topic there would be no saying where he would stop. [Laughter.] He thanked the members for the kind manner in which he had been received.

At the close of the debate upon the constitution, President Bain announced that the Convention will meet at 9 o'clock, Thursday morning, and in all probability conclude its labors that day.

THIRD DAY—THURSDAY MORNING.

President Bain announced the first order of business to be the consideration of the new constitution. *Constitution of the Millers' National Association as Adopted.*

The millers of the United States engaged in the manufacture of flour, who have paid in full all assessments made by the Millers' National Association

tion, as heretofore organized for purposes of mutual defense, and who are members in good standing of the State Associations in their respective States, do hereby organize themselves for purposes of mutual protection and benefit as "The Millers' National Association of the United States," under the following articles of Association:

SECTION 1. The officers of this Association shall consist of a President, two Vice-Presidents, a Secretary and Treasurer, and an Executive Committee. The offices of Secretary and Treasurer may be held by the same person, who shall execute his official bond to the Association in such sum as the Sub-executive Committee may approve. The Executive Committee shall consist of one member elected by each State having a State organization and represented in the National Association. Such member shall be elected at the annual meeting of each State Association. In case of failure to elect at such meeting, the President of such State Association shall fill the vacancy by appointment. This Executive Committee shall elect a Sub-executive Committee of five from its own members—three of whom shall constitute a quorum; the President of the Association being *ex-officio* a member of this committee. Said Sub-committee shall exercise the full power of the whole Executive Committee, and shall be authorized to act at any time in the interim between the meetings of the full Executive Committee. They shall also elect the Secretary and Treasurer of the Association, and who shall be subject to their control.

SEC. 2. The annual meetings of the Association shall be held at such time and place as the President and majority of the Executive Committee shall direct.

SEC. 3. The Secretary shall make up the roll of membership from the members of the several organized State Associations who have paid in full the assessments heretofore made by the Millers' National Association, as heretofore organized, and shall also include all millers in the States where no State Associations are organized, who have paid in full the said assessments, and no new members shall be admitted without paying all assessments theretofore paid by the original members, including the assessments made for mutual defense under the organization heretofore existing. *Provided*, that the Executive Committee shall have full power to admit as members any mills not benefited or protected by the expenditure up to January 1, 1879, on such terms as they may deem equitable, and also to reject any applicant for any cause which they may deem sufficient.

4. The Executive Committee shall have charge of the financial business of the Association; and for the furtherance of the objects of the Association for mutual defense, or for the common benefit in any manner deemed advisable by them, may assess the members in a sum not exceeding, in any one year, ten dollars for each run of burrs, or its equivalent in capacity of other machinery (as may be adjusted by the Executive Committee) operating on wheat or its products. Which assessment shall be collected by the several State Associations and by the Executive Committee direct from members in unorganized States.

5. The Executive Committee shall cause all claims made against any member of the Association for alleged infringement of patents of milling processes and machinery, and which shall be referred to them by any State Association, or any member from an unorganized State, to be fully investigated; and if they are advised that such claims are invalid, they shall, on behalf of the Association, defend the same, and may employ legal and other assistance. *Provided*, The Executive Committee shall only assume defense, when satisfied the interest of the Association requires it. This section shall not be construed to relieve manufacturers from the duty of protecting those who purchase from them, nor to relieve millers of the duty of purchasing new devices or processes with due care, and from responsible parties only. Said Committee also, in their discretion, may arrange for the use of valid and meritorious patented improvements for the members of the Association on equitable terms.

6. Any suit, so defended at the expense of the Association, shall be managed and conducted in its defense by the Executive Committee; and no settlement or compromise thereof shall be made except on terms accepted by the Executive Committee for the common benefit of all the members who may use the devices or processes in controversy; and any member so sued and defended, who shall settle or compromise his case without the consent of the Executive Committee, shall refund to the Association all sums expended in his defense by the Association.

7. Each State shall be entitled in the Annual Convention to the number of votes according to the number of burrs or their equivalent represented by its full-paid members, whether such State is organized or not; and all voting shall be by States.

8. Within sixty days after call for payment of assessment made by the Executive Committee of this Association, as herein provided, the Treasurer of each State Association shall, with the amount collected from the members of said Association, send to the Secretary of the National Association a list of the members of said Association who are in default on said assessment; and the Secretary of the National Association shall, with the consent of the Executive Committee, cause the names so reported to be removed from the list of members.

9. This constitution may be altered or amended at any annual meeting of the Association, provided such alteration or amendment shall be submitted at least one day before a vote is taken upon it, and receive at least two-thirds of the votes present at such meeting.

On motion of Mr. Green the Chair appointed as a Sub-Executive Committee, to serve until the new Committee can be elected by the State organizations, Messrs. John A. Christian, Minnesota; S. H. Seaman, Wisconsin; Alexander H. Smith, St. Louis, Mo.; J. A. Hinds, New York; and C. H. Seybt, Illinois.

Report of Committee on Milling and Improved Methods.

Mr. President and Members of the Millers' National Association:

GENTLEMEN: I again have the honor of addressing you upon the subjects of milling and improved methods, and I assure you that I feel myself unable to satisfactorily discharge the duty to which I have been assigned, and I hope that other gentlemen present who are more capable will favor us with their views on this same subject, for it is a fact that much can be learned by many if not all of us, by imparting our views and listening attentively to others. Not that we can become success-

ful millers, without personal experience on our own part, but from the fact that until within a few years the manufacture of flour in this country has been a kind of hap-hazard way of doing business. Each miller having his own views and following them regardless of a practical result. Hence our experiences have been varied, and by hearing the views and experience of others, new thoughts are suggested to us, and new theories are thus brought up, and an inventive inspiration, so to speak, is set in motion, and new and valuable means are invented and brought into use, which, if not at once successful, lead to the adoption of something more capable and better adapted to accomplish the desired result. But to improve or perfect any mechanical means or machine, in any branch of manufacture, it is necessary at first to apply the mind to develop the defects in the old, and to devise new mechanical appliances to overcome the defective features; second, the will and the patience to carry forward the experimental operation or trial, changing and adjusting until a satisfactory result is obtained, for it would be almost a miracle if any new machine or device should perform its work perfectly and produce a satisfactory result at the first trial. And any machine constructed upon correct and scientific principles should not be thrown aside as worthless, but by carefully watching the performance of the work, we should find where the wrongs are and apply suitable improvements to make the operation successful. This we, as millers, are not apt to do, but denounce it at once, cast it aside and purchase some other machine only to find the same fault to it.

If we should adopt some such reasoning as this, I am of the opinion that much less money would be spent in trying to make new machinery, perfectly adapted to an entirely new method, work as an attachment to an old and entirely different plan, and condemning the machine because it will not do the work it was never intended to perform, and which could not be done effectually with any device. We might say then that what practice is to the development of new and improved machines and mechanical devices, so is the exchange of devices to the development of new theories. There is no branch of manufacture which has made more rapid progress within the last four or five years than that of making flour, and when we look back over the past to the mill of a few years ago, with five run of stone and six to eight reels, to the same mill to-day with same number of burrs, and twenty reels, and the necessary machines and machinery to complete a first-class mill, it is not at all surprising that we have made many mistakes and at many times have not taken a scientific and practical way of bringing about our results. Nor is it at all surprising that these results were not in any degree satisfactory. But notwithstanding all this we have made vast improvements but have not yet attained that perfection which would seem possible in the way of granulating and separating the different products of grain, and without entering into a discussion of the chemical construction of the grain which had been so ably handled by some of our leading milling journals, both in this country and abroad, we will proceed to notice some of the methods of manipulating and handling the grain and its products during the process of manufacture, and discuss their merits.

The manner of cleaning our wheat, which is generally in use, seems to demand as much attention at present as any part of the mill, and, as far as my observation goes, nine mills out of every ten are not cleaning their wheat properly. There seems to be a disposition among millers to adopt machines which run very rapidly and carry the grain against the case by centrifugal force, and the grain is caused to travel against the case with side of the berry against the scouring surface, thus scouring the very part of the grain which needs the least rubbing and leaving the end of the grain which demands attention untouched only as it may come in contact with other grains in passing through the machine. This means of scouring seems to be very defective, and I should, if such machines are to be used, use nothing but the brush, as they are most certainly superior to the beaters. But I am of the opinion that the day is not far distant when the Ending Stone will supersede all other cleaning machinery for scouring the wheat, to be followed by a brush and suction. The wheat should be graded before going to the ending stone, into two or more grades, and each grade going to a separate stone; this process, in my opinion, will be carried down to the exclusion of the germ. I am aware that millers generally are not prepared to accept this plan, but so far as I am able to judge, this seems to be the only practical way of treating the grain to relieve it of what we want to get rid of in the operation of scouring. It may be urged that this is going back to the oldest known methods. This may be true, but the principle seems to be a correct one, no matter whether old or new.

As to the methods of grinding, I have heretofore expressed myself so fully as in favor of the stiff spindle or rigid couplings between the spindle and runner, that I need say nothing further than that I have found no cause to change my views on this subject, but to the contrary, every principle in the whole system of reducing seems to point to that as the correct principle. As to the mode of grinding, so long as we reduce our grain at one operation there can be but at one point at which we can grind, and that is just as close as we can grind without breaking the germs, and when we find the germs broken there is one of two things to which we may charge it, either that we are grinding too close or that our burrs are doing imperfect work from other causes; this we may readily determine and

apply the remedy. There is nothing, however, to be gained by grinding higher than will leave the germ in perfect condition; but a close granulation would be preferable if the germ was not considered. There are at present some very thorough and scientific experiments being conducted for the purpose of performing the operations of removing the germs and granulating the grain by other means than the burr. This work is being carried on by thoroughly practical men, and if a success, we may look for a revolution in the manner of reducing the grain, so far as the first operation is concerned at least. As to the diameter of burrs, there is a great difference of opinion. But if the old spindle and irons are to be used the 4 to 4½ stone seem to have the preference, but in either case up to a certain limit the same result may be produced by an increase of motion and a proper distribution of face and furrow, and the required draft for the furrows, as it would seem that a draft suited to a stone running 200 revolutions would not be suitable for one running 100 revolutions.

No stone of large diameter can do good work running at the first named speed, as it would be impossible to so reduce the face as to prevent heating, which would at once injure the result. But a much larger difference in the speed of a burr may be allowed than is generally thought proper. The extreme may be placed at 160 revolutions for a 48-inch burr, but beyond this point it becomes impossible to so reduce the face surface to do the work properly, although in all cases where it is possible the slow motion is preferable, as the granulation is more thorough and complete, and the granular parts more perfect and solid, and the work of handling both in bolting and purifying can be more readily accomplished, and with far more satisfactory results. It is not, however, clear that the burr is necessary at all to produce the best results in making flour. One thing is sure, that if either the burrs or rolls were to be discarded from mills using both, the burrs would evidently be thrown out, as it would be an impossibility to produce a result satisfactory to the miller without the use of rolls. And I am inclined to think the iron rolls much superior to any other, and that, too, without differential speed. I am opposed to the differential speed on the roll, from the fact that it seems to give the best result to do the crushing without tearing the particles to be reduced. To do this, is necessary to reduce at one operation and then disintegrate with a brush or other suitable means. And so far as my observation goes this is much the best means.

The bolting or dressing and separating the products after being reduced by any means, is a matter which it would seem that but very few millers have been able to manage, judging from the various samples thrown upon the market, there being only about one-third of it which has been properly bolted. This is partly owing to an insufficient bolt surface, and partly owing to the inability of the miller to arrange his cloths so as to give satisfactory result; and in many cases had the miller the knowledge and the proper cloth he could not control the products of his bolt in such a manner as to be master of the situation.

There seems to be a great mistake made by millers as to the difference in flour made by the old and new way of grinding. Some millers maintain that the old way makes just as good flour as the new, but in most cases we find on their brands and sacks the words, New Process flour. Some even go so far as to call it Improved New Process. The fact is, so far as experience goes, they have made a failure of "New Process," and make it up in advertising. There is, however, a great difference between a New Process mill and a mill where gradual reduction is practiced with good results. Any mill may be a New Process mill. It is only necessary to change the working of the mill in any way from that which has been the mode of grinding or bolting, and you have a New Process mill. This is most generally done, in the average mill, by adding a new dusting reel somewhere where it cannot be got to with the products nor the products got away from it, and an additional purifier to clean up tailings. Every miller who has patched up his mill to the New Process feels the need of just one more dusting reel annually, together with the improved purifier for tailings. I speak from experience when I say that in the end one hundred per cent. of the profits will be invested in these appendages. This kind of work will make a new process mill. But to fit this mill for gradual reduction would be quite a different thing. First it would be necessary to tear out all these new improvements and add such new machinery as would be necessary after rearranging the old, and in most cases the old machinery is not worth rehandling, as labor and expense in refitting will make it cost more than to put in new and improved machinery, which will answer the purpose more satisfactorily.

The idea that an old purifying mill can be made to do perfect work by the addition of one or more purifiers, and compete with mills constructed for making flour by the most improved methods is also a very great mistake. Purifying, like bolting, must be reduced to a system, and one purifier will not do the work perfectly for any mill, no matter what the capacity of the machine may be. In fact, purifying does not differ from bolting, with the exception of the application of the blast and suction, and the same arrangement of bolts which will bolt perfectly, will, when applied to a series of purifiers, make the work of purifying perfect, and we should so arrange our purifiers that we have the same control over the product, while passing over the several machines, that we have over the products of the bolts while in the process of bolting. Middlings may be cleaned by being passed over two or three machines, but the result is

much better if we are able to use more machines of less capacity, and take from each machine such middlings as are sufficiently purified, and send the remainder to another machine for further working, and by continuing such a system as this, we may follow it down until we get from the whole a satisfactory result.

But, to make a satisfactory result, we must have middlings to begin with, not flour. There are some manufacturers of middlings purifiers, however, who claim that their machines will purify flour. I do not care to accuse these gentlemen with trying to practice a fraud upon the millers, but, to say the least of it, they evidently have more confidence in the merits of their machines than any miller could possibly have, after purchasing the machine and giving it a fair and impartial trial. The result of such an experiment will result in placing the impurities in the barrel, and the flour in the dust-room, as the separation of any product from another, by blast or suction, carries away the lighter portion, leaving those portions which are of greater specific gravity.

At the last meeting of this convention, I expressed myself as in favor of those machines using a combined blast and suction, and the success attending the use of machines so constructed, since that time, has proven very clearly the position then taken to be correct. Machines constructed on that principle are doing better work to-day than any machines in the market.

It is not my object, at this time, to attempt to teach you how to mill, but I have been asked repeatedly what arrangement and what machinery I considered necessary to produce a first-class result, and I will answer that question here, not in detail so far as the arrangement of machinery if necessary, and if you will use the stone, I will say: Put in, for an ordinary mill, nine run of stone, two ending-stones, one wheat grader, one brush, nine sets of rolls, four machines for disintegrating purposes, twelve purifiers, two machines for disintegrating bran, and thirty reels, sixteen feet long; these, with machinery to drive it, all properly arranged, will give a first-class result. And it will be necessary to make such a result as would be satisfactory and profitable. With this machinery in your mill, you can then begin to learn improved milling. J. F. GENT.

Messrs. Homer Baldwin and B. C. Kreider, of the same Committee, submitted a report as follows:

We, the undersigned Committee on Milling and Improved Methods, beg leave to submit the following report as additional to the one already submitted:

Believing, as we do that the rigid driver is theoretically correct, but that practically the adjustable driver produces better results than the rigid driver, we respectfully submit, that in lieu of the rigid driver, we would recommend the use of the most adjustable and sensitive driver that can be procured, and in the treatment of middlings would recommend thorough purification, and that the middlings too fine to purify without too much waste be reduced by the use of porcelain rolls, and that the large middlings that are intermingled with germ after being as thoroughly purified as possible, be reduced to finer middlings by the use of iron rolls, and that all middlings thoroughly purified be reduced to flour by the millstone, and as a further purification of the flour we recommend that it be rebolted until made as pure as can be done.

All of which is respectfully submitted.

HOMER BALDWIN,
E. C. KREIDER.

A communication was read by President Bain from Jonathan Mills, inviting the Convention to visit at the close of the session his experimental rooms at Chisholm Bros., 46 S. Canal street, to inspect his special machines for the reduction of wheat and middlings and cleaning bran.

SACKS FOR BARRELS.

The following was introduced, and after some discussion, Mr. Dewars, of Kansas City, agreed to print 10,000 copies at his own expense for distribution:

To the Dealers and Consumers of Flour in the United States:

The Millers' National Association, in Convention at Chicago, beg leave to submit to the trade generally the importance of substituting sacks for barrels, as packages for flour, being well satisfied that it would effect a great saving to consumers and dealers for the following reasons:

First—The sacks containing the same quantity of flour will cost only about one-half as much as barrels.

Second—The freight on the same quantity in sacks would average about 5 per cent. less than in barrels.

Third—The sacks, when emptied, are worth two-thirds their original cost, whereas the barrels are almost wholly useless, and in most cases a great nuisance.

Flour can be put up in sacks in such quantities as may be most convenient for the trade in its various branches, thus saving the dealer the trouble and expense of repacking his flour from barrels into sacks, as is frequently a necessity in the trade.

Begging your careful consideration of this subject, and inviting a trial of this method, we suggest that you submit such inquiries as you may desire to your mill correspondents.

Mr. Alex. H. Smith, of St. Louis, presented and read the

Report of the Executive Committee.

GENTLEMEN OF THE CONVENTION: Your Executive Committee have the pleasure of formally confirming the glad tidings flashed over

THE UNITED STATES MILLER.

the wires from St. Louis on the 17th of March last, that the "Cochrane re-issue patent, having been expanded to embrace a claim for purifying middlings, when no such process was described, suggested or claimed in the original patent, it is void." This sentence, uttered by the learned judges, after three weeks' deliberation, following nearly three weeks' careful hearing of the very able presentation, preceded as that was by a year of laborious and extensive preparation, disposed of the Cochrane claim. Till the very hour of the decision timid millers were frightened into compromising, regardless of repeated and unvarying assurances from your committee, which assurances, by the way, have been fully verified by results; and these results, we trust, will sufficiently prove the value of our organization. While this committee have been, at times, troubled as to where the funds were to come from to conduct the defense of the suit, they were happily relieved at such seasons, either by the liberal advances from some of the State associations, by the kind indulgence of the attorneys engaged in the case, or by the assistance and pledges of individual members of the committee; all of which assistance came so spontaneously as to lead us to believe that our successors will have little trouble in the future in seeing their way clear to defend any further litigation that may be made against us.

Since the decision of the Cochrane suit, nearly all the delinquent States and individuals have responded to their assessments, and on the 17th of February almost all of the individuals comprising the National Association had fully paid up their dues, and were consequently able to submit for your information a very satisfactory financial statement of the affairs of the Association. Referring to that statement, it is proper to explain, that, under the plan adopted at Buffalo, in June, 1877, providing that each State Association should defend its members, New York, Minnesota, Missouri and Wisconsin incurred large expenses, which might have been saved, had the pooling, under one management, adopted at the Toledo meeting, in November, 1877, been agreed to at that time. As those expenses, however, were incurred in good faith by the different State Associations referred to, and were intended equally for the protection of all of the members of the National Association, whether such member was sued or not, common justice required that the National Association should assume the liabilities so incurred by the several States; and your committee so deciding, these amounts were credited on the assessments made against those States. The sub-committee of this Executive Committee agreed with Mr. Geo. Harding, of Philadelphia, a celebrated patent lawyer, for a specific sum to defend the members of the Association against the "Cochrane Process" suits; such sum to include not only the fighting of the injunction suits brought against our members at St. Louis, his services in our application to reopen the Deener, Cissel & Welch decision of the Supreme Court, but also to prepare the case with evidence, models, traveling and other incidental expenses necessary to the trial of the suits at St. Louis, and also in regard to the case against Vail & Shotwell, at New York. And we are pleased to say that the sum agreed upon was much less than the labor performed entitled him and his assistants to.

The result arising from the re-hearing of the Deener case in the Supreme Court of the United States, you are all familiar with, but many of you may not know that a large share of our success in the final hearing of the St. Louis cases was due to our success in that case; and few of you can be aware of the large sums of money necessary to procure the models, evidence and information that crowned the final effort at St. Louis, enabling us to defeat one of the most insidious and well-conducted schemes that was ever concocted against any class of manufacturers in this country. It is needless for us to say to you, gentlemen, how much, outside the pecuniary benefits we have received, we feel indebted to Mr. Harding for the able manner in which he conducted our cases, spending almost his whole valuable time to our services; traveling in season and out of season; tracing evidence here, and a few days later following other evidence, several hundred miles away; he did for us what few attorneys, no matter how well they were paid, would have done; and, although our cause was a just one, we are free to acknowledge that without his valuable assistance we might not have been so successful as we were. In this connection it will not be out of place to say that Mr. Harding's efforts were ably supplemented by Messrs. Cole, of Minnesota, Judson, of Missouri, and Selden, of New York, the two latter gentlemen having done a large part in preparing the detail work and evidence for the final trial, although neither of them were called upon to participate in the argument before the Court. Judge Cole also assisted in working up evidence, and not so constantly engaged as the two other gentlemen, made a very able argument in elucidation of our side of the question. The plaintiffs in the Cochrane suit have given notice of appeal, but after the very able and extended decision of the learned Judges, Messrs. Dillon, Treat and Nelson, we have no fear of the final result; and therefore this famous Cochrane suit, which gave us all so much trouble and anxiety, may now be dismissed finally from our minds.

In regard to other litigation now in progress, it can be neither as expensive nor important as the past litigation has been, but in our opinion funds ought to be provided in advance to meet all necessary expenses, and prevent the troubles and other serious annoyances that your committee have been subjected to during the pendency of the past suit.

The defense of Griffin of Buffalo, in the

suit against him by the Consolidated Middlings Purifier Co., which company includes the Smith, Barter, dead Cochrane, and resurrected Stoll, and several other minor patents, is being conducted by Mr. Harding, under the direction of our sub-committee; and we have reason to believe that the outcome of this suit will be as favorable as it was in the preceding case. The "Consolidated Co." has also entered suits against the manufacturers of purifiers, and as the parties whom they have sued, the La Croix Purifier Co., of Indianapolis, and Messrs. Collins & Gathmann, of Chicago, are both responsible concerns, we anticipate no trouble to the users of the machines manufactured by those companies, in defending suits that may be brought against the purchasers of such machines; and we hope that hereafter parties who may have claims against the millers for infringements of patents, may take the same honorable course in insisting that the manufacturers of such machines shall bear the responsibility, and not the innocent users of them.

The defense of the Denchfield suits against members of the New York and Illinois Associations, we have delegated to the Executive Committees of those States, assuming, however, the expense of such defense by the National Association.

The main embarrassment in these cases, as in the defense of the Cochrane suit, was owing to the fact that our attention was so absorbed in the greater necessity of defending against what we might now term the "Big Ring." The New York decrees, however, are not so serious as was the Deener decision in the other case, and we have no doubt of our ability to overcome them, when the suits come to a final trial.

The Baker re-issue of which you have all heard, issued in 1867, and re-issued a short time ago, seems to be the oldest purifier patent, excepting the Stoll, which latter is a re-issue of a re-issue upon an original grain cleaner patent, issued in 1866, expanded fast to include "other material," and thence to a middlings purifier; but as "expansion," by the late St. Louis decision, seems to be the death of re-issues, we have no idea that Stoll will give us any trouble.

At the moment, these are the only patents menacing our members, and although, as we have already remarked, their defense or settlement will cost us a mere nothing, yet possibly before the term of our successors expires in the coming year other cases may arise in which the sum recommended by us as an assessment on each run of burrs in our proposed constitution may be all that will be necessary.

Heretofore we have been in the habit of assessing each run of burrs operated by our members. Hereafter we should recommend that no full assessments should be made on any run of burrs except on 36 inches diameter or over; on burrs of less diameter two runs of burrs should be reckoned as one, and in case where rolls, whether of porcelain or iron, are used, three sets should be assessed as equal to one run of burrs; these assessments to be made on burrs whether operated for custom or merchant work, and whether operated on wheat, middlings or bran.

In urging the adoption of the constitution proposed to you by our sub-committee, you must acknowledge that we have grave reasons for insisting that all our members shall be bound in a legal way to their fellow members till the questions at issue are decided. Taking the Cochrane case as an example, meeting as it did with successive reverses, it did not seem to become disheartened, for it was secretly stimulated by weak members of our organization, and by outside millers who furnished to it the "sinews of war," and enabled it to give us the protracted fight it did. Our wounds, gentlemen, came from members of our own household. It is sad to confess that in this day and generation men could be found so short-sighted and false to their business interests, and indeed to their manhood, as to surrender not only their money but their good name, to such an unwarranted and impudent attack. While knowing that it is scarcely necessary to tender any advice to our members, on such a subject, we do not deem it inappropriate here to suggest that our business policy ought to be that, apart from considerations of friendship or malice, we should refuse to have any business relation with the corporation or individual who have endeavored to obtain money from us as payment for processes or machinery to which they had no legal title. On the other hand, it ought to be our duty and pleasure to encourage those who, with honest claims against us, are willing to accept a fair remuneration for their interests, on terms as expressed in our circular, "alike honorable to users and remunerative to inventors."

In conclusion, we again call your attention to the need of a strong legal organization, and trust that millers who have heretofore remained outside of our Association will see not only that honor requires their joining us, but that their self-interest will compel them to do so. It is also hoped that the time and funds of the Association will not in the future, as in the past, be monopolized in the defense of patent suits, but that other and more agreeable means for improving the art in which we are all interested will be suggested and reduced to practice.

The proposed annual assessment, as submitted in the draft of the constitution which we now lay before you, is a very moderate insurance, indeed, for the mutual protection and information that the Association intends to and expects to afford to its membership, but this sum we feel confident will be ample for all our needs the coming year.

Respectfully submitted,
JOHN A. CHRISTIAN, Chairman.

Statement of Account with the State Associations, based on the Toledo Assessment, November 21, 1879.

No.	Assess- ment	Amount Paid	Balance Due	Amount Advan'd
Illinois.....	450@\$25	\$11,250.00	\$ 9,743.22	\$ 1,506.78
Indiana....	200 "	5,000.00	2,660.00	2,350.06
Iowa.....	200 "	5,000.00	3,275.00	1,725.00
Kansas....	100 "	2,500.00	75.00	2,425.00
Maryland.....	150	3,750.00	4,250.00	500.00
Michigan.....	300	7,500.00	4,175.00	3,325.00
Minnesota.....	333 1/3	13,333.33	21,877.29	8,543.96
Wisconsin.....	400 "	10,000.00	11,700.00	1,700.00
Missouri.....	250	6,250.00	6,824.44	574.44
Nebraska.....	100 "	2,500.00	278.00	2,222.00
New York.....	350	8,750.00	8,977.64	227.63
Ohio.....	200 "	5,000.00	3,000.00	2,000.00
Unorg'zed	100 "	2,500.00	2,670.00	170.00
	3,333 "	\$83,333.33	\$79,495.50	\$15,553.78
				\$11,717.04

National Executive Committee, Dr.—In account with National Millers' Association.

1879.

May 12.—By amount paid Hon. Geo. Harding, ret'r..... \$ 3,000.00

May 12.—By paid Harding account, services and expenses..... 40,350.00

1878.

June 1.—By paid C. A. Seward, expenses and fees to Europe..... 4,783.69

June 1.—By paid account N. Y. Association, models, traveling, etc..... 3,025.15

June 1.—By paid ac't Wisconsin Association, expense ac't Association allowed..... 713.95

June 1.—By paid ac't Minnesota Association, expense ac't Association allowed..... 2,702.14

June 1.—By paid ac't Missouri Association, expense ac't Association allowed..... 3,829.62

June 1.—By paid ac't Michigan Association, expense ac't Association allowed..... 100.00

June 1.—By paid account for incidental expenses, per ac'pt account..... 234.00

Oct. 4.—By paid F. N. Judson, services and expenses..... 2,416.17

1879.

April 1.—By paid F. N. Judson, services and expenses..... 1,283.29

1878.

May 1.—By paid Gordon E. Cole, services and expenses..... 2,515.45

1879.

May 12.—By paid Gordon E. Cole, credited to Minnesota Association..... 2,877.46

May 12.—By paid account Minnesota Association, incidental expenses..... 834.38

May 12.—By paid account N. Y. State Association, accounts allowed..... 1,427.64

May 12.—By paid account Illinois Association, accounts allowed..... 2,516.22

May 12.—By paid account Missouri Association, account allowed..... 181.39

May 12.—By paid account, Springfield, Ohio, expert's testimony..... 200.00

May 12.—By paid account, incidental expenses, printing, etc..... 631.15

May 12.—Bal. in hands of Treasurer, \$1,473.29

May 11.—Bal. in hands of J. A. Christian, chairman..... 3,500.00

4,973.29

\$79,495.59

NOTE.—The above financial exhibit is based upon the so-called Toledo apportionment. The different States will in the future be assessed according to actual number of burrs or their equivalent on which all demand of \$25 per run are now paid. A complete revised list of each State must be sent to the Secretary of the National Association by July 1st next.

After the reading it was received and adopted unanimously.

Mr. Gift moved the following resolution:

WHEREAS, We believe a well-made strong paper package is all that is necessary for the transmission of samples through the mails, therefore

Resolved, That we respectfully, through our Secretary, ask the Postmaster General to give this matter his careful consideration, and, if not inconsistent with the good of the service, he be asked to approve of a suitable paper package for the transmission of such samples.

Mr. Gift—We have heard complaints so often about flour leaking from packages and injuring the mail. I think it would be cheaper for the Association to buy rat traps for the Government than to pay extra postage on ten packages.

The resolution was adopted.

WIRE IN WHEAT.

Mr. Crangle—Some millers of the United States are having a great deal of trouble with the wire wheat. They need not have any trouble at all on that account if they only will adopt the magnet. I move the following:

WHEREAS, By the introduction of simple gangs of magnets in the great mills of St. Louis, Minneapolis, and other places, the evil of wire and other metallic substances in wheat has been obviated.

Resolved, That the complete success which has attended their use warrants us in recommending them to all millers.

The President said he could speak from experience in regard to this matter. Every now and again he had examined a burr and found pieces of wire under it. A man came to his mill and asked him to try some of the magnets. He had no idea of the amount of wire that passed through, but he tried it. The wheat he was running had been standing in the mill for a month or two. It was run twice over a Moline separator, and was running the second time down the spout. The man dropped the magnet in, and in a few minutes it was taken out with more pieces of wire attached to it than he had ever seen or expected to see. He believed that much of the damage which they had hitherto charged to bugs was really due to these "wire bugs." (Laughter.) These nail-heads and pieces of wire cut the bolting-cloths and worked much mischief. He did not believe in the effect of the magnets even then, and thought there had been some predestination in it. His engineer was present at the time, and they tried it again, putting in one gang of five magnets this time. Then his son timed the operations, and in five minutes they found the wheat coming out at the top and took out a big handful of wire. When he came down the

next morning they found not only wire, but nail-heads and small screws. He took up a quantity of the wire on the Board of Trade and showed it there. They all knew that in wheat there were small pieces of black stuff which was known as "black gravel," but which was certainly ore of some kind, and this the magnets took out. Fortunately, there was no patent on these magnets, and they were very cheap—only a dollar each. Five of them would be enough to take out as much wire as would be found in an ordinary mill. He had thirty-eight in all in his mill. They were in all places, even in the bran-spout, and there they took out little pieces which in some way had escaped the others. He was strongly in favor of the resolution, and of the general introduction of the magnets all mills.

Mr. D. R. Sparks, of Ill., expressed his approval of the magnets in equally warm terms. At their State Association last winter the subject of wire in wheat came up, and resolutions opposed to the use of wire binders were offered, all the mischief being attributed to the wire. On that occasion he opposed the resolution, and they had found that the wire was not all to blame. Not long ago a magnet man came along and induced him to put in thirteen of the magnets. In a very short time they took out a large handful of wire, little nails, and tacks of all descriptions. The tacks were not of the kind used in mills, showing that they came in the wheat. The samples shown were not exaggeration at all, for he could show equal quantities taken from his own mill. He believed it would pay any miller to put in magnets, especially as there was no patent on them, and they were very cheap.

The resolution was then adopted.

Mr. Schumacher, of Ohio—A little matter I wish to call the attention of the Convention to. There are others probably in the same fix as we are. The Executive Committee charges us \$25.00 per run on two hundred run when we ought to have been assessed for one hundred and twenty. We are charged that and such further assessments as may be made hereafter, and I ask Mr. Smith to give an explanation as to there being \$2,000 due from our State.

Mr. Smith—I am very happy to have an opportunity to make an explanation because it may explain matters generally.

At Toledo in November, 1877, there was a representative meeting of one or more gentlemen from each State, all authorized to act for each State Association. It was there determined that the defense should be consolidated and not conducted by the several States as heretofore. It was based on how many run of burrs each State had. After canvassing the matter two days an assessment was settled upon of \$15 per run. Afterwards, at Indianapolis, a year ago, the funds falling short, an additional \$10 per run was made. For Illinois a basis of four hundred and fifty run was agreed upon.

Indiana was agreed upon on a basis of two hundred run. We had her down for three hundred run, but the representatives said it would be easier for them if it was put down to two hundred, and down it went. Iowa on the same theory was arranged at two hundred run. Kansas was agreed upon on a basis of one hundred run. Maryland agreed on a basis of one hundred and fifty run. She had paid to us \$4,250, being \$500 more than she was entitled to pay.

Resolved, That the complete success which has attended their use warrants us in recommending them to all millers.

own statement it must be self-evident that the assessment at Toledo was mere guess-work.

The President—Mr. Shumacher at the Toledo meeting was one of the most enthusiastic members. Ohio was assessed at first on 300 run. Mr. Shumacher thought that would be a little too strong, so we made it \$3,000. During the Cochrane issue one of the things that did me most good, was one morning on going down to my office. Our names had got in the papers and telegraphed all over the country. But that morning when I got to my office I found a telegram signed P. & A. Small, York, Pa.—“draw on us for \$500 and make us members of your association.”

Mr. Sparks—I do not know how Illinois is reported as behind. I have worked pretty hard to get up Illinois already. We agreed in Toledo for Illinois upon \$6,750, and we have paid that and considerably over. The last assessment—\$10 per run—making in all \$25, shows that we have more than paid. I have, and I guess all have.

Mr. Smith—I want to tell a little joke on Brother Seybt. In the committee the other day Mr. Seybt was feeling very jolly that he was 21 runs ahead on the claim. He got it in his head that 400 run was Illinois' share, and said they had 421 fully paid up. He said he would go back and correct Illinois. I happened to turn back to a scrap-book I had, and in that scrap-book I had the account of the Toledo assessment, and I found that we will charge Illinois 450 run instead of 400. (Laughter.) Mr. Smith was sure the money would be forthcoming shortly.

Mr. Sparks did not want the idea to prevail that they were behind. They would soon see that right.

The President—You are a daisy. (Laughter).

Mr. Sanderson—is it not true that Michigan, within a day or so, has paid in an additional \$2,000?

Mr. Smith—She has. That is, she has through her Treasurer telegraphed to Mr. Hayden, authorizing him to draw on Mr. Merrill for \$2,000, and that \$2,000 is credited here to her.

Mr. Schumacher, of Ohio, thought that all the States should be re-assessed according to the actual number of members. The matter was left to the Executive Committee.

Mr. Serrin said that his State would have made a better showing had it not been for the fact that on Feb. 27th he was telegraphed that all members were to be full paid by March 1.

Mr. Smith explained that the telegram read, “appear as full paid on March 1,” for reasons of importance.

Mr. Gibson said that the telegram had had a good effect in his State.

Mr. Elles gave assurance that Indiana would not be found wanting.

Mr. Gibson offered the following resolution:

“That we hereby tender the thanks of this Association to the members of the Executive Committee, and particularly to the Sub-Committee, for the very able and efficient manner in which they conducted our affairs, and the vexatious and dangerous law suits which so far have been so successfully carried forward. That we appreciate the ability and immense labor expended in our behalf.”

Mr. Elles thought the President's name should be included.

The President—The President's name will be added. (Laughter.)

Mr. Atkinson offered the following resolution, which was received unanimously:

Resolved, That the thanks of this Convention is hereby tendered to the Chicago, St. Louis and Alton; Chicago and Northwestern, Chicago, Milwaukee and St. Paul; and Chicago and Southeastern Railway Companies, for the very liberal courtesies extended to the members of the Convention, and the gentlemanly manner in which they were treated by the Conductors.

NOMINATION OF OFFICERS.

The Committee for the nomination of officers for the ensuing year, reported through Mr. Halliday, as follows:

CHICAGO, May 15, 1879.—Your Committee for the nomination of officers for this Association for the ensuing year, would respectfully report as their unanimous choice: For President, George Bain, of St. Louis; Vice-Presidents, L. Fletcher, of Minneapolis and Robert Tyson, of Baltimore.

The gentlemen recommended by the committee on nomination were unanimously elected. President Bain called Vice-President Brown to the chair, and said:

Mr. PRESIDENT: I made up my mind four months ago that I would not accept the position of President of the National Millers' Association again. I thought that such honor should be distributed among the members. It is certainly a great honor to be elected, and re-elected again and again, especially as I have done so little in comparison to the work done by the other officers. I thank you, gentlemen, for the unanimous manner in which you have elected me. I will try and do better

in the future than I have done in the past. I am not very good in making speeches on such an occasion as this. I thank you for the generosity you have shown me. (Applause).

At 12:30 the members had a recess until 1 o'clock. The President stepped to the platform at 2 o'clock and informed those present that the Executive Committee were in session considering a settlement of a prospective suit. He would suggest that they continue the recess till 2:30.

AFTERNOON SESSION—THURSDAY.

The President called the Convention to order at 3 o'clock.

Mr. Smith—The Sub-Executive Committee have to report that they have selected Mr. S. H. Seamans, of their own number, to act as Secretary and Treasurer, and desire me to explain that the vast amount of correspondence, which has been entailed upon individual members heretofore, renders it necessary that we should have some one of ourselves centrally located to assume the work of correspondence, or have it done, believing that the interests of the Association will be best served by having somebody as familiar as possible with the work. The President suggests, and I am very happy to say we are entirely satisfied with Mr. Little's services in the past, as Secretary. I have to read in addition to the Executive Committee's report, the following notice:

“The Executive Committee notify the members of the Millers' National Association, that they have made satisfactory arrangements with R. L. Downton in behalf of the present members of the Association, and such as may have become members of the Association before the 1st of September, 1879, and that all members of the Association who may hereafter purchase or use rolls not sold or licensed under Downton's patent, will not be defended by the Association on any suit brought under Downton's patent for the use of said roll.”

Mr. Smith—The terms of this arrangement will be communicated in due course by the Secretary to the officers of State organizations, on application. The terms will be entirely satisfactory to all interested in the Millers' Association.

Mr. Smith—The Executive Committee have still an additional report to make, to which I call your attention:

“The Executive Committee of the Millers' National Association notify the members that they have made satisfactory arrangements whereby members of the Association will become released from liabilities for the use of the combination of the brush, sieve and wind-blast, secured by the patents of George T. Smith, on machines now owned by said members, as long as said machines shall be used, and they notify all members purchasing machines containing that combination hereafter, that the Association will not defend persons so purchasing for the use of said combination, or persons who may not avail themselves of the terms of the compromise.”

Mr. Cole, Illinois—I would like to know how far the territory for the Smith patent extends?

Mr. Smith—I can answer that question. It is a matter wholly unimportant under the terms made how much territory they own. The members affected will be satisfied I think when they see what protection there is. The arrangement does not compel members to buy the Smith purifier. Members before buying a machine should write to the State Secretary and get his sense whether it is well to buy that machine or not.

Mr. Elles—it seems to me that we are in the dark, and it is a glorious thing to be in the light, and I would like some information.

Mr. Smith—You will ultimately get the information from your State Secretary, and it is optional with the members whether they take advantage of the terms offered or not. We think we have made an excellent arrangement for you. We think we cleared off a great deal of credit business of the past, and as for the future you still have the liberty to buy any machine you please.

Mr. Elles—You must not understand that I reflect in any way on the Committee. I consider them honorable men and beyond bribery, but still this is a matter of great importance coming on us so suddenly, and it is not a trifling matter, and I feel worried. I cannot go home and rest easy over this matter unless I have a better explanation.

Mr. Smith—This does not include a compromise of the Cochrane suit; we believe we have killed that.

Mr. Schumacher—It seems to me members all join to know what, in case of such compromise, they would have to pay. It seems to me that the members should be protected by paying a royalty for other machines than the Smith.

Mr. Smith—“Mr. President, I think this question will be answered a great deal more quickly if you call the Hon. Geo. H. Harding to the stand and let him explain.”

Hon. Geo. Harding—The agreement, gentlemen, which was understood, for certain

reasons, was not to be made public, was one which the five members of the sub-committee were very largely interested. It is a great advantage to themselves, and I do not think there could be a better test than the fact that the gentlemen believe it very advantageous to themselves. I was at the discussion, and there was harder fighting and contention than I ever saw any individual client resort to. If any gentleman is dissatisfied with it in the Convention, it does not bind him in the least. You are all free to act under it. As to the title of manufacturers, that will be investigated, and if those gentlemen have no title in that State you need not pay them a cent. As to the purchase of machines hereafter, there they put the screws on to the utmost extent to secure a favorable purchase in the future; an option that will far exceed the expectations of the Association. No man need take any machine he does not choose to. It is an arrangement that I would advise any one to take. The agreement is not made by the Executive Committee; they only agree and we do not agree to anything. When you buy a machine of a manufacturer let him say: “I will defend you if you are sued by any one for that machine.” You say to him: “If I buy this machine and pay you your price for it, and a man should come along after I had bought it and say I was infringing on his patent, I should expect you to come forward and protect it.” Should Mr. McCormick, of this city, sell a machine to-day, and to-morrow a person come along and sue him for an infringement, he would spend thousands of dollars to defend that machine, for if he did not and judgement was rendered against him it would affect his whole business. Every responsible manufacturer is bound to defend his machine. I would advise the committee whenever they can get an option of this kind at low rates and favorable terms to take it, as it is the safest and best thing to be done.

This thing binds nobody. It is a mere repeated declaration of the Association that favorable arrangements are made by which any gentleman can escape from any possible reliability an arrangement by which a great advantage is secured to every member of this Association. Innocent people buying machines hereafter must look to the manufacturer of that machine to defend it in case of emergency and guarantee the machine he sells. It transfers the expense of defending the patents they put forward. They have the right to do it, and should be prepared to show the right. They ought to be prepared to come forward and defend that man, and if they defend him they defend a thousand, but if the Association is to defend every man who chooses to go to a manufacturer and buy a machine it will soon cripple the Association. Or he may go to a man who has no capital. He sells a machine to the gentleman for \$100 and then says he to the gentleman who buys it,—In case any one should charge you with using a machine infringing on their patent you make the Association defend it, and when they show that it infringes on no patent, then they establish my right to build that machine and I will go to work and build. You will find no case where the purchaser of a reaping machine, hay rake, a plow—no case where the question whether the manufacturer of that machine had a right to make and sell it is put upon the purchaser, he ought to be ready to stand by and defend his purchaser at all times. Make the manufacturer defend the purchaser, then, gentlemen, the legal department of this Association may be abolished in about a year and a half. [Applause.]

Mr. Gibson—No individual member of this organization can afford the expense and take the responsibility of seeing whether a certain thing is valid or not, and this Association can afford thousands of dollars to do it. He thought the Association could well afford to stand by all her members. The Association had spent a great deal of money to defeat an iniquity and then gives an indorsement to the validity of their patent.

Mr. Smith—That we have just spent a large sum of money is so; what we did defeat was the Cochrane reissue. We did defeat that. We simply made an arrangement. The Cochrane matter in St. Louis was a process patent which would have covered any middlings purifiers whatever.

Mr. Gibson—Does this compromise settle the suits now pending in the courts at Buffalo?

Mr. Smith—The question on the validity of brush has not been decided on. If the millers were defeated they could not collect enough on that brush to defeat anybody, but we do not establish the validity of the title.

Mr. McAtee—It seems to me my friend Mr. Gibson has misunderstood the matter. He

claims, or seems to claim, that the Executive Committee has decided upon the validity of a patent. I don't think they have done any such thing. They have merely, for a very moderate sum, exempted those of our number who choose to accept it from any damages which may arise by reason of their patent on the part of those who choose to accept the patent. Such being the case, I can readily understand and see it is an option. We are all, more or less, engaged in the grain trade, and we all know how we take an option if it does not cost anything.

Mr. Gibson said the option put the purifier and brush in the hands of the ring.

Mr. McAtee—I think I have the perfect right to purchase any machine with brush attachment, and if I choose to buy of Knickerbocker & Co. I am exempt from any responsibility.

Mr. Smith—if in future you buy a machine with brush under sieve with a blast up through the cloth, we understand that you buy that machine from somebody who will guarantee you.

Mr. Sanderson—I have more confidence in the Executive Committee and the legal gentlemen than I have in the individual opinion of any member, consequently I think we had better accept the situation as it now exists than to trust to future litigation that may arise; consequently I am in favor of accepting the recommendation of the Executive Committee.

Mr. Sparks did not wish to take any special part in the discussion. He agreed with Mr. Sanderson. He thought the sooner they adopted the report the better.

Mr. Gent—I listened very attentively to Mr. Harding, and while the speech was good I can not see that it made but one point, and that was this: “He argued that we should see to it that every manufacturer of machines, when we went to buy, had the right to sell that machine.” Why should we pay more attention to the Smith purifier than any other?

Mr. McAtee moved and it was seconded that they endorse the Executive Committee. It was carried with but one dissenting voice.

Mr. Baker—I wish to make a resolution tendering our thanks to the local Committee for the excellent manner in which they have provided for us, and also to the citizens of Chicago for the kindly reception they gave us.

The motion was carried unanimously.

Mr. Sanderson—I would offer a resolution tendering thanks to Mr. Little and Mr. Merrill, for the able manner in which they have conducted affairs during their term of office.

Unanimous vote of thanks.

Mr. Brown moved and it was seconded that the Sixth Annual Convention of the Millers' National Association adjourn *sine die*. This was carried, and the President declared the Convention adjourned.

Doing the City.

[At 4 o'clock, Thursday afternoon, immediately after the final adjournment, the members were taken in hand by the reception committee and escorted in carriages through Lincoln Park, South Park, and Drexel Boulevard. The trip was a source of great enjoyment to all who took part.]

Correspondents, upon matters pertaining to the Millers' National Association, will please address the Secretary and Treasurer, Mr. S. H. Seamans, at Milwaukee, Wis.

HOW TO GET RID OF FLOUR MILL DUST.—A French process designed to circumvent the perils traceable to dust in flouring mills, is thus described: The stones should be surrounded as completely as possible by a movable covering of wood or sheet-iron, which should have no opening in front but what is absolutely necessary for the work.

In order to avoid the choking up of the ventilating pipes, it is necessary to provide special discharge pipes for the water, according as the stones are partly below or entire above the floor. Again, the passages intended for carrying the dust should be placed underneath the stone, and beyond the point where the work is applied, regarding the direction of motion; it should have a breadth a little greater than that of the stone, and a depth of 8 inches at most, for the largest stones, a sliding door serving to close it whenever dry dust is not produced. The water discharge pipe should also have a valve, which may be closed when water is not used, and when it is desired to carry off the dust produced when the stone is trued. If there are only four or five stones in the work, a single collecting pipe will suffice, and the blower should be placed at the end; but if there are eight or ten stones in one line, a second collector, 16 inches by 12, may be placed in the middle of the length of the first, and perpendicular to its direction. If, too, there are two long parallel rows, with eight or ten stones in each, they should be connected with the second collector, or with a third, 16x20 inches, communicating with the ventilator.—*Ex.*

THE UNITED STATES MILLER.

Grain Growing in Europe.

The report of J. J. Woodman, of Pawpaw, Michigan, Assistant Commissioner to the Paris Exposition on Agriculture, embracing alimentary and other farm products, has been received. It contains a very interesting account of the exhibit of grain. The first part of the report is devoted to a description in detail of the cereal products of each European country, but the most interesting part of the report is contained in an elaborate table which gives the average amount of the cereal productions of Europe and the countries which furnish a surplus for commerce, and also those which are obliged to import bread-stuffs. This table shows that the average annual production of cereals in Europe amounts to 5,147,796,000 bushels, of which Russia produces 1,653,021,000 bushels, or nearly one-third; the whole of Germany, 765,000,000 bushels; France, 710,130,000 bushels; Hungary, 300,330,000. On the basis of an average of 15 58-100 bushels of cereals for each person for home consumption, Roumania, Denmark, Russia, Prussia, France, Hungary, Bavaria and Sweden alone raise sufficient for home consumption, while the following countries in their order are exporters: The German Duchies, Belgium, Spain, Austria, Wurtemberg, Ireland, Turkey, Finland, Great Britain, Saxony, Servia, Holland, Norway, Greece, Italy, Portugal and Switzerland.

The report shows that the whole of Europe, with a population of 297,000,000 inhabitants, produces 5,147,396,000 bushels, or only about 17 bushels for every inhabitant, while the United States, with 40,000,000 inhabitants, produce 1,629,027,000 bushels, or 40 bushels for every inhabitant.

The countries of Europe, the report says, which produce relatively the most wheat are Spain, Italy and France; the most most rye are Finland, Switzerland and Germany; the most barley are Sweden, Norway, Denmark and Germany; oats, are Ireland, Sweden, Norway, Denmark, Hungary and North Germany; and the most corn, Roumania, Servia and Portugal; that but little buckwheat is raised, except in Holland and France.

The report says that many of the countries of Europe, especially Great Britain and France are largely deficient in malt products, that they are now turning their attention to the United States for supplies; and the English and Irish stock raisers and feeders are greatly alarmed at the success which has attended the importation of fat cattle and dressed meat from the United States. In it they see the same ruin to stock and meat raising in their countries, as they have experienced from the importation of our cereals to their wheat raising. It appears, however, that a new idea has just entered the English mind, and the importation of American cattle is to be made quite as beneficial and remunerative to the English feeders as it is to the American farmers. It has been shown by experiment that American cattle can be imported and fed on English soil, as the English feeders, know how, at a profit, even if the grain fed them is of foreign production. All of this would be satisfactory to the American farmers who are seeking a market for their coarse grain and cattle, provided this system would be as remunerative to them; but certainly the idea is not flattering to our skill in feeding, and calls for more science, skill and economy in this branch of American agriculture.

WORKING STEAM AT HIGHER PRESSURE.—It is well known that great efficiency in steam engines is obtained by an increase of pressure and the use of expansion. To accomplish this, the point lies not so much with the engine as with the boiler, engineers finding no difficulty in working an engine with steam at 150 or 200 pounds per square inch; therefore Mr. Walt, an eminent Liverpool engineer, thinks there is no practical limit to the working pressure. Some engineers will be inclined to differ with this opinion, as the management of steam used expansively in simple reciprocating engines at ranges of pressure much exceeding those named, is considered by many risky practice.

COOLING HOT JOURNALS.—Von Heeren proposes a method of cooling hot journals by a mixture of sulphur and oil or grease. The fine metal dust formed when a journal runs hot, and which strongly acts upon both journal and bearing, forms a sulphide of sulphur. This compound, which grows soft and greasy, does not cause any appreciable amount of friction. It has been very successfully used by the steamers of the North German Lloyds.

Our Eastern Letter.

THE TRANSPORTATION QUESTION—MILLING IN PENNSYLVANIA AND NEW JERSEY—SOME JOLEY MILLERS MET ON THE ROAD BY OUR REGULAR CORRESPONDENT.

PHILADELPHIA, Pa., May 10, 1879.—The flour manufacturing and marketing trade has, for the past month, been in a comparatively fair and prosperous state. The only thing that appears to have marred the severity of the flour interest in the East has been the trouble between the shipping merchants and railroad companies. This difficulty, which has been maintained for several months past, has led to the holding of several meetings in New York and elsewhere. The most important of these indignation conferences was held in New York City, on Thursday May 8th. The meeting was largely attended by the prominent representatives of the flour trade, who are extensively engaged in the handling and marketing of Western made flour, the bulk of the product coming from Wisconsin and Minnesota. The recent orders of the railroads limiting the time in which flour could be stored on their wharves were discussed, and a compromise was accepted by the meeting, and was sent to the railroad companies for their approval. The special committee having the matter in charge was enlarged, and renewed efforts will be made to obtain terms, and it is believed that when the business resumes its usual activity, say about June, that the corporation will consent to the proposition as offered by the flour men, as the interest controlled by them is assuming mammoth and important proportions, and the railroad companies will seriously injure their own interests if they do not discriminate in favor of those who operate in flour. During

the discussion at the meeting, Mr. Thomas Carle, a leading flour man, stated that the roads carrying the Western product objected to bringing flour litherage free that was intended for home trade, and also to indefinite terms for storage. The railroads, he said, had refused the first clause of the compromise, (which allows flour not free from litherage to remain on the docks four days,) inasmuch as the Philadelphia merchants were demanding similar concessions which could not be granted, and that the roads say that the discrimination in favor of New York must cease. The flour merchants of New York and Philadelphia are planning for the organization of a combination to defeat the rather unscrupulous schemes of the railroad monopolists, and if the project is successfully accomplished, the plans of the railroad magnates may yet be checkmated.

It seems that there is never to be an end to patented milling machinery suits. A flour mill supply firm of this city, Messrs. Tetes & Allen (who are among your advertisers), have just entered suit in our County Court against George Tobbs, who has, it is averred, infringed the patents of the complainants for an improvement in grist mills. Judge Butler has granted a preliminary injunction in favor of Messrs. Tetes & Allen.

The UNITED STATES MILLER correspondent has made several extended tours through the flour manufacturing regions of Pennsylvania and New Jersey during the past month, and the industry at all points visited has shown fine evidence of prosperity. While passing through the milling districts of New Jersey your correspondent visited the millstone region, in Middlesex and Somerset Counties, in the midst of one of the most beautiful and fertile sections of the agricultural portion of the State. On the Millstone river, upon which is situated the graceful little town of Millstone, are located a number of excellent and valuable mill properties. Prominent among them are the Weston Mills, seven run of stone, of which A. S. Teneyck is proprietor; Bleachville Mill, four run of stone, John Oakey, proprietor; Griggstone Mill, three run of stone, Edgar & Nichson proprietors; Rocks Hill Mills, four run of stone, D. H. Mount, proprietor; Kingston Mills, four run of stone, Joseph Robinson, proprietor; Opdyke's Mills, two run of stone, James Opdyke, proprietor.

The establishments of all these worthy millers are excellent ones, and have tained at a fine reputation in the country where situated for the superiority of their manufactures. During a long and pleasant conversation with Mr. A. Teneyck, of the Weston Mill (who, by the way, has one of the oldest and finest flour and saw mills in the State of New Jersey), the UNITED STATES MILLER correspondent learned that the flour-making industry of New Jersey is in a reasonably good and profitable state, all the millers experiencing easy and comfortable times. Mr. Teneyck—who is a brother-in-law of Congressman Alvah A.

Clark, of New Jersey,—is one of the wealthiest and most influential millers in the State. Your correspondent met Mr. Teneyck on the morning of May 1st, after a ten-mile walk from New Brunswick, searching for milling information for The MILLER, and the manner in which Mr. T. entertained your representative fully proved his appreciation of newspaper men and their labor in behalf of its interests. Success to Mr. Teneyck, the Weston Mill, and all the millers and mills in the Millstone district. The UNITED STATES MILLER correspondent also met another representative New Jersey miller, at Weston, and rode with him on the Delaware and Round Brook Railroad as far as Van Aken station. This gentleman was John Oakey, of Blackwell's Mills. Mr. Oakey is an old, experienced and well-informed miller, and furnished your correspondent with much important and interesting information relative to New Jersey mills and their operations. May the shadow of Mr. O. never grow less, and may his mills become a monument of prosperity and wealth to its genial, jovial and enterprising owner, is the wish of your traveling scribe.

Previous to the above-mentioned trip, the MILLER correspondent had made a flying trip through the interior of Pennsylvania, going as far as the Wyoming coal regions, where amidst coal breakers and thousands of tons of the "Black Diamonds," are situated many extensive and largely-producing flour mills. Among these may be mentioned the mill of Walter Gibbons, of West Nanticoke; the Valley Mills, D. S. Drierbach, proprietor; Beach Haven, Drierbach Brothers; Wilkes-Barre and the Lily of the Valley Mills, near Kingston, The Weston Mill Company, limited, merchant millers, of Scranton, is a first-class concern. The corporation is very extensively engaged in the manufacture of a superior flour, and their product holds a high reputation and paying market wherever it is sent.

The grain shipments to this city this spring have been actually enormous, and the elevators owned and operated by the various railroad corporations and individual firms have been taxed to their greatest capacity. The immense increase of business at the grain elevators of the Pennsylvania Railroad Company at Washington street wharf, where the ocean steamships are loaded down with heavy freights of the golden products of the great West, has necessitated a number of improvements and alterations in the working capacity of the elevators, and also an enlargement of the machinery and other apparatus. One of the largest conveying belts in the world, if not the largest, has been ordered by the Pennsylvania Railroad company from Mr. Dietrich, the well-known rubber manufacturer of this city. It is now ready to be placed in position and has been manufactured in one continuous piece of smooth rubber and canvas. It is 1,145 feet in length and 36 inches in width, and weighs over 7,000 pounds. It is made of this great length because the company required a belt strong enough and long enough to convey the grain along the different shuttles from one end of the elevator to the other.

DUSTY MILLER.

ANOTHER OF KRUPP'S MONSTERS.—Herr Krupp, the famous German gun maker, has just eclipsed all his former efforts by constructing a new steel cannon, which is the largest piece of steel ordnance yet made. It weighs 72 tons, is 32 feet long, and has a calibre of 21 $\frac{1}{4}$ inches, while that of the English 80-ton guns is only 18 inches. The charge for this monster gun is to be 385 pounds of prismatic powder, the projectile being a chilled iron shell weighing 1660 pounds and having a bursting charge of 22 pounds of powder. The force of the shot on leaving the gun is estimated at 31,000 feet tons, and it is calculated that when placed at an angle of 43 degrees with the horizon the gun will throw its projectile a distance of 15 miles. The forthcoming trials will take place on a range 11 miles long, and targets will have to be placed at such a distance that the gun will have to be directed by other means than the visibility of the object to be hit.

CANADIAN MILLERS' ASSOCIATION.—President, Jas. Goldie, of Guelph; Vice-President, W. H. Howland, Toronto; Hon. Secretary and Treasurer, H. N. Baird, Toronto; Secretary, Wm. Greely, Toronto. The Executive Committee is composed of the following gentlemen: S. D. Saunby, London; Hon. T. N. Gibbs, Oshawa; R. Blain, Gault; Wm. Lukes, Toronto; Jas. Webster, Flamboro; H. N. Baird, Toronto; Wm. Spink, Thorold; H. Gooderham, Meadowvale; A. McNaughton, New Castle.

Recent Patents.

The following patents were issued from the United States Patent Office, April 15th, 1879:

Microscope for Examining Flour and Bolting Cloth.—Henry J. Deal, Bucyrus, Ohio.

Attrition Mill.—Henry J. Duc, Jr., Charleston, S. C.

Attrition Mill.—John J. Hayes, Green Point, N. Y.

Middlings Separator.—Charles B. Hill, Nashville, Tenn.

Oat Separator.—Joseph Magoon, Canyon City, Oregon.

Middlings Purifier.—James H. Redfield, Salem, Ind.

The following patents were issued April 22d, 1879:

Flour-bin.—Edwin S. Bliss, Richburg, N. Y.

Middlings Separator.—David Charlesworth, Egmondville, Ontario, Canada.

Mill-stone Driver.—Wm. F. Cochran, Jackson, Mo.

Water Wheel.—John Ebersole, Chambersburg, Pa.

Mill-stone Dresser.—David L. Ellis, Homer City, Pa.

Turbine Water Wheel.—Andrew J. Howell, Edensburg, Va.

Middlings Separator.—Silas S. Shaver, Menasha, Wis.

Bag-holder.—James A. Smith, Ashland, Ohio.

Grain Toller.—David Waugh, Wellsburg, W. Va.

Cornsheller Separator.—Daniel P. Wist, Oak Grove, Pa.

STONES AND HURSTS.—A controversy having arisen regarding what, in millers' parlance, is the most proper phraseology in which to designate the number of stones belonging to a given mill, we have taken the trouble to consult good milling authority upon the subject. Should the miller say eight run of stones, eight runs of stone, or eight runs of stones? Mr. William Fairbairn was for fifty years the greatest mill architect, millwright, and mechanical engineer in England. Titles were heaped upon him, such as C. E., LL. D., F. R. S., F. G. S., etc. He was corresponding member of the Institute of France and of the Royal Academy of Turin, and was Chevalier of the Legion of Honor. He also made his name famous as the author of various works upon subjects belonging to his profession. In these he invariably uses the phraseology, *runs of stones*, except when he substitutes the word *pairs* for *runs*. In our future dictionary of milling terms we shall pronounce Mr. Fairbairn to have been eminently correct. It is well enough to add that, in speaking of the framing or house that incloses the running gear of each pair of stones, the same authority uses the word *hurst*, and not *husk* or *bust*.—*St. Louis Miller.*

WHY GLASS IS BROKEN BY HOT WATER.—No person could be so foolish as to hazard the breaking of a glass by pouring hot water upon it, if he understood the simple means of accounting for the breakage. If hot water is poured into a glass with a round bottom, the expansion produced by the heat of the water will cause the bottom of the glass to enlarge, while the sides, which are not heated, retain their former dimensions, and, consequently, if the heat be sufficiently intense, the bottom will be forced from the sides, and a crack or flaw will surround that part of the glass by which the sides are united to the bottom. If, however, the glass is wetted with a little warm water, so that the hole is gradually heated and thereby expanded, boiling water can then be poured in without damage. If a silver spoon is placed in a goblet or glass jar, boiling water can then be poured in without danger, unless the article has been taken from a frosty closet and is very cold.

WIRE BELTS.—A German firm is manufacturing woven steel wire belting of a peculiar make, as described below, which they claim to transmit power well, to operate without lengthening, and to run smoothly because there is no overlapping at any place. The spirals of wire are woven across the belting, so that three, four or more spirals form one link. The space between two links is besides, filled up with a cross-piece, so that the closely woven netting of spiral wire forms a band of great strength and flexibility. It is faced and lined with rubber or leather.

EPIGRAPH ON AN HONEST MILLER.—A correspondent of a Hampshire paper says:—Near the east end of Carisbrooke Church, Isle of Wight, stands an old head-stone which is little noticed, and its inscription, which is as follows, seldom read:—"In memory of James Perry and Mary his wife, who died December 21st, 1747, aged 70; she died January 9th, 1750, aged 65 years.

Here lies a man the farmers loved,
Who always faithful to them proved,
And dealt with freedom justly fair—
An honest Miller all declare."

Card from E. P. Allis & Co.
TO THE MILLERS OF AMERICA.

In January, 1876,—in the early days of the recent advances in milling—we purchased from R. L. Downton the exclusive right to manufacture "Downton Purifiers" and "Downton Peerless Dusters," which two machines were represented by him to be of great value to millers, and we expended many thousand dollars in vain experiments with them. We, at the same time, purchased from him a Process Patent, now known as "Downton Process," and took from him the following assignment, which was duly recorded in the Patent Office at Washington:

(Copy.)

Assignment of Patent.

For and in consideration of the sum of one hundred and twenty-five dollars, to me in hand paid by Edward P. Allis & Co., of Milwaukee, Wisconsin, I hereby sell, assign, and set over to said Allis & Co., their successors and assigns, the exclusive right to manufacture and sell rolls for crushing grain or middlings, or other substances, which right or process is secured to me under United States Patent No. 162,157, dated April 20th, 1875, for the full life of such patent, and any re-issues, extensions or improvements thereon, except that a shop-right to manufacture and sell the same in the State of Minnesota, but not elsewhere, is granted to O. A. Pray, of Minneapolis, said Allis & Co. having an equal right to sell in said State of Minnesota.

Dated at Milwaukee, Wis., this 3d day of January, A. D. 1876.

(Signed), ROBERT L. DOWNTON.

Received for record January 27th, 1876, and recorded in Liber D 20, Page 140 of Transfer of Patents.

{ SEAL. } IN TESTIMONY WHEREOF, I have caused the seal of the Patent Office to be hereunto affixed.

(Signed), ELLIS SPEAR,
Acting Commissioner.

There being no adequate demand for the "Downton Purifier," its manufacture was of no great value, and the "Peerless Duster" being an utter failure, its manufacture was abandoned after great and serious loss, and the personal connection of Mr. Downton with us ceased, but no rights we had purchased or acquired were ever abandoned or invalidated.

Subsequently to the above, as we owned the Process Patent and were making iron Rolls, we made a contract with Mr. Oscar Oexle for the exclusive manufacture and sale of Wegmann's Porcelain Rolls in America, and entered upon their manufacture and sale. Mr. Downton meantime, having found his "Purifier" unpopular and his "Duster" a failure, while the Process Patent that he had sold us bid fair to be of value if it could be declared valid, undertook the task of defrauding us out of it and of substantiating its validity, and for this purpose began suit against millers using Rolls. Mr. Oexle maintained that the Downton Process Patent was invalid from previous use, and as the claims and threats of Downton interfered with the sale of Porcelain rolls, he, at his own expense, took up the defense of the millers in the use of Rolls, and this suit, which Downton is prosecuting and Mr. Oexle defending, on the validity of the patent, is still undecided, though a preliminary decision has been given against its validity. We were not parties to the suit, were not represented in it, and had nothing to do with it. We were selling Porcelain Rolls, relying upon their merits and also upon our perfect right to the "Process" under the Downton assignment, should the patent be decided valid. The question of our ownership of the patent has never been legally before a court, and only recently have suits in that direction been instituted.

At this juncture came the late Millers' Convention in Chicago, and the millers of the country have the following occurrence forced upon their consideration. Notwithstanding one of the main objects of the Millers' Association is to defend millers against fraudulent patent claims, and notwithstanding the expenditure by the Association of thousands of dollars to break up patent rings, and notwithstanding the personal expenditure by Mr. Oexle to relieve the millers from Downton's claims, and also notwithstanding the Downton Patent belonged to us and was legally ours, who were not threatening or suing millers for its use, even Mr. Downton acknowledging our ownership by recently beginning a suit to set it aside—notwithstanding all this, the Executive Committee of the Association, at the close of the Convention, issued a notice to the effect that they had made arrangements with Mr. Downton whereby all members of the Association using rolls not sold or licensed under the Downton Patent would not be defended by the Association on any suit brought under Downton's Patent. This notice is very ambiguous, and may be construed as advising purchase of us, as we sell and license under Down-

ton's Patent, but it was evidently obtained by Mr. Downton for the purpose of inducing members to buy rolls of him and pay him a royalty. This strange action of the Executive Committee in trying to induce members to buy of Downton, if they did so try, the use of a patent he does not own, and that, too, when the validity of the patent itself is in suit, with a preliminary decision against it, is unaccountable, and cannot meet the approval of the Association, nor call for their own confirmation, when this true state of the case is presented.

We have now no recourse, but to give this public notice to all millers, that we own the "Downton Process Patent," and shall protect our ownership to the end. We also assure them that we, and we alone, are the persons that can give them a valid license to use the Process, and that none other will be respected. We assert, as a principle of law, that until our recorded assignment is declared void by law, no suit for damages can ever be maintained against them for its use on rolls purchased of us, even though the ownership should finally be decided against us, which is hardly possible; while on the other hand, every one using this process on rolls bought of Downton or any one else, is liable to us from the moment of their use. If millers buy their rolls of us, they are safe in any issue of the suit, for we are the recorded owners and they are legally innocent purchasers, and we beg them not to neglect their own interests nor ignore our rights, for we shall defend them and establish our claims.

We build the best machines in market, sell them at a reasonable price, and give a license for their use that can never be overturned. We are now able to supply machines rapidly, and ask that patronage that is our just due.

EDW. P. ALLIS & CO.

FAST WORK.—Some time ago we referred to a wonderful piece of fast work in producing flour from standing wheat and putting it through all the usual manipulations, so that the guests of the experimenter were eating hot biscuit, made from the flous, in four minutes and twenty-seven seconds. The gentleman who proposed and so successfully carried out this novel experiment, was Mr. James Lawton, proprietor of the Wild Moss Mills, in Carrollton, Mo. The wheat field was standing but a few rods from the mill and the grain separator standing ready in the field and running at full speed. The mill-stones were also started at the word Go. The mules hitched to the reaper were thoroughly encouraged by the liberal application of clubs, and as they passed over the field men grabbed the wheat and put for the separator. As soon as half a bushel came from the separator it was rushed off to the mill, through the cleaner and into the hopper, then bolted once and carried into the office, where a rousing fire was going and all the facilities for a hasty baking prepared by Mrs. Lawton and her assistant. It was quickly baked and passed to the many guests. This is the best time ever made, and Mr. Lawton feels proud of it, naturally. He says he thinks this time might, under extremely favorable circumstances, be shortened seven seconds. Mr. Lawton's fancy brands of flour are well and favorably known.

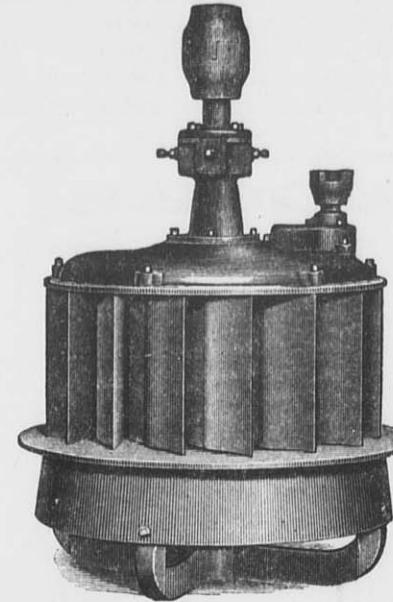
INDIAN CORN IN EUROPE.—The United States Consul at Havre has sent to the Department of State a copy of a correspondence between himself and Dr. Johnson, now in Paris, on the subject of maize. It has been charged in France that maize produces a fatal disease in men and colic in horses, when used by them as food. It is the object of the Consul and Dr. Johnson to refute the idea, and to show the healthfulness and economy of using Indian corn in the kernel as meal flour for food. The importation of corn from the United States into France in 1876 was 326,508 bushels; in 1877 it was 1,785,490 bushels. The importation of corn from Italy and Turkey in 1876 was nearly 4,000,000 bushels; in 1877 it fell to 2,500,000 bushels. It is mostly used in feeding horses in the livery, truck and tramway stables. It is given to cattle to a small extent, mixed with other food. It is also beginning to be used for distilling and for making starch. Damaged corn is bought for these purposes.

The steam mill at Bocklow, Mo., was destroyed by fire on the 3d ult. Before the ruins were fairly cooled the proprietor, J. S. Wertz, had contracted with Nordyke & Marmon Co., of Indianapolis, Ind., for a new three-run new process mill.

Fisher & Davis, millers, Madelya, Minn., dissolved partnership. Jno. Y. Fisher continues the business.

The Victor Turbine.

The past few years have been fruitful in improvements in machinery and appliances for milling purposes. So many mills have a limited supply of water upon which to depend for power, that we question as to the efficiency and economy of the water wheels they have in use becomes one of great importance. Among the recent improvements in turbines, those embodied in the Victor Turbine, herewith illustrated, are prominent and deserving of careful attention. The capacity of this wheel is quite phenomenal, being more than double that of other wheels of the same diameter, and in percentage of useful effect it also steps to



THE VICTOR TURBINE.

the front, as will appear in the following table of results obtained in accurate tests of this wheel at the Holyoke Testing Flume.

Head in feet.	Horse power	Percentage useful effect.
15 in. Wheel	18.10	.8808
25 in. Wheel	17.96	.8584
30 in. Wheel	11.65	.8676

We need not enlarge upon the above remarkable results. They are claimed to be unprecedented among recorded reliable tests of Turbines, and we feel sure will command the attention of all who desire to obtain at the least cost the largest amount of power from a limited quantity of water.

The extraordinary power of this wheel comes with its numerous advantages, among which we may name economy of flume space, quick speed, light gearing, less loss in transmitting power, and particularly adapts it for shipment to distant points and over expensive freight rates.

The gate is an inside register, having a central bearing, and, with the pinion and segment for operating it, is entirely housed and relieved from pressure, rendering it of easy operation under high falls. The wheel proper, has a downward and outward discharge, and is of a peculiar and novel construction, but its centre case and gate are substantially similar to those of the well known Eclipse wheel manufactured by the same firm for several years past.

We have received most flattering accounts of the performance of these wheels, and its manufacturers solicit an opportunity to confer with all parties whose supply of water is limited, and who are, therefore, in a situation that will enable them to appreciate high results. Illustrated catalogues and full information concerning this wheel can be had on application to the manufacturers, Stilwell & Bierce Manufacturing Co., Dayton, Ohio.

AMERICAN VS. ENGLISH TOOLS.—Thomas Fletcher, in *English Mechanic*: I have at this moment at least three-fourths of my tools of American manufacture, many of which have been brought at a very fancy price. If it were not absolute necessity, I should be exceedingly foolish to buy American tools at a high price if English tools could be bought which would do the work equally well. From my own practical experience the difference between the two is this, that an English workman does not, in the first instance, learn what a tool is for, and adapt the tool to the requirements; an American will, as a rule, use his brains, and make what you want without spoiling the whole by ridiculous blunders. If I needed a thing, making which required judgment on the part of the workman, and I could not give my personal and constant supervision, I should, as the simplest way to get the thing right, send the instructions to America.

H. C. Metcalf, of Anamosa, Iowa, is erecting a four-run new process water mill with all the latest improvements. The entire work is being furnished by Nordyke & Marmon Co., of Indianapolis, Ind.

EVERYBODY READS THIS.

NEWS OF THE WORLD.

ITEMS GATHERED FROM CORRESPONDENTS, TELEGRAMS AND EXCHANGES.

The steam mill at Winnebago City, Minn., is again at work.

O. E. Bunnell, of Prairie du Sac, Wis., has moved to Nebraska.

Geo. W. Stanton, of Janesville, Ia., has sold his flour mill.

A mill is being built at Fountaintown, Ind., for Macy & Frauch.

J. C. Ruddiman's grist mill burned in Muskegon, Mich. Insured.

Jennison & Co.'s saw and grist mill, Janesville, Minnesota, burned.

A. H. Wheeler is pushing work on his mill dam at Flandreau, Dakota.

A. Aldrich, of Metamora, Mich., has purchased a two-run mill outfit.

Colchester, Ill., will soon have a two-run custom mill in running order.

The grist mill at Mendovi, Wis., has started up and is doing excellent work.

The millers at Hastings, Minn., are happy over the replenished water supply.

T. D. Vaughn, of Cedar Mills, Texas, is putting up a fine little custom mill.

The mill at Mapleton, Iowa, owned by F. L. Day, is being remodeled and enlarged.

A mill at Baalzen, Saxony, was recently destroyed by an explosion of flour dust.

Jackson & Hill, of Ladonia, Texas, are building a new two-run mill, run by an Atlas engine.

Messrs. Hartman & Markward, of Warrensburg, are erecting a four-run new process merchant mill.

G. Schmuck & Co., of Cannelton, Ind., are adopting the new process, and increasing the daily capacity.

Shields & Tomlinson, of New London, Iowa, are putting in new buhrs, and adopting the new process.

Mr. Hannum's mill at Ames, Iowa, has been thoroughly repaired, and is now doing a general custom business.

Wm. Smith, of Solomon City, Kan., is building a two-run mill. Nordyke & Marmon furnish the machinery.

The mill of Thornburg & Small, at Martinsburg, Ind., is undergoing important alterations in the new process.

The long discussed project of an annual fund for mill employees, is to be carried into effect at Budapest, Hungary.

Hulbert & Paige, Painesville, Ohio, are building a two-run water mill at New Ulm, Minn., for Messrs. Frank & Bentzin.

The Gilman town, Wis., mill has passed into the hands of Messrs. Ellis & Davis, of Eau Claire, and is to be thoroughly repaired.

Sohl & Evans, of Noblesville, Ind., are putting in additional buhrs and fixtures to supply the increased demand for their choice flour.

Sprague's thirteen-run mill at Rushford, Minn., is running day and night. A one-thousand barrel order was received a few days ago.

Sparta, Ga., is having a custom mill. The proprietor, James Smith, purchased the machinery of Nordyke & Marmon Co., of Indianapolis, Ind.

E. G. Beecher, of Wells, Minn., has sold his mill at that place to a stock company, for \$8,000. The mill is to be put in repair and started up at once.

One of the finest four-run new process mills in Kentucky is being erected for R. C. Poage & Son, at Ashland, Ky. It is driven by an Atlas engine.

Alexander & News, of Greenfield, Indiana, are remodeling their mill to modern ideas, under direction of Nordyke & Marmon Co., of Indianapolis, Ind.

F. Miller & Co.'s brick flouring mill, Watertown, Wis., burned May 9th, containing 500 barrels of patent flour. Loss almost \$4,500. No insurance.

J. Corbet & Son's flour mill at Chaddesley Corbet, near Kidderminster, England, was destroyed by fire on the 11th of April, the loss amounting to £5,000.

The mill of Smith & Giddings, of Danville, Ill., is being enlarged with additional buhrs, bolts and purifiers. Nordyke & Marmon Co., of Indianapolis, Ind., are doing the work.

The Triumph Power Corn Sheller, manufactured by Hulbert & Paige, Painesville, O., is reported as having a very large run this season—larger than for several years.

THE UNITED STATES MILLER.

Vissible Supply of Grain.

	1879,	1879,	1878,	1877,
May 24,	May 17,	May 25,	May 26,	
Wheat	bush.	bush.	bush.	bush.
Corn.	13,900,446	15,331,650	7,507,564	5,184,000
Oats	9,897,127	11,332,544	8,882,244	10,426,824
Barley	1,649,426	1,549,756	2,301,349	2,302,046
Rye	873,810	982,246	1,158,042	849,066
Total	27,188,602	30,017,575	20,356,927	19,427,226

Public Debt Statement.

WASHINGTON, June 2.—The following is the public debt statement for the month of May:

Six per cent bonds.....	\$324,910,750
Five per cent bonds.....	620,445,559
Four and a half per cent bds. 250,000,000	
Four per cent bonds.....	627,334,800
Refunding certificates.....	28,723,680
Navy pension fund.....	14,000,000

Total coin bonds.....	\$1,967,414,760
Matured debt.....	855,306,660
Legal tenders.....	346,742,546
Certificates of deposit.....	26,795,000
Fractional currency.....	15,874,777
Gold and silver certificates.....	17,789,090

Total without interest.....	\$407,192,783
Total debt.....	\$2,429,914,403
Total interest.....	27,859,362
Cash in treasury.....	430,501,297

Debt less cash in Treasury.....	\$2,027,182,468
Increase during May.....	62,250
Decrease since June 30, 1878.....	8,604,363
Current liabilities, interest due and unpaid.....	
Debt on which interest has ceased.....	5,126,876
Interest thereon.....	55,306,660
Gold and silver certificates.....	2,070,977
United States notes held for redemption of certificates of deposit.....	17,789,090
United States notes held for redemption of fractional currency.....	26,795,000
Called bonds not matured for which 4 per cent bonds have been issued.....	8,408,106
Cash balance available June 2, 1879.....	169,771,060
Total.....	145,331,938

Available assets—cash in Treasury.....	\$430,501,297
Bonds issued to Pacific Railway Companies, interest payable in lawful money—principal outstanding.....	
Interest accrued and not yet paid.....	1,615,587
Interest paid by United States.....	41,773,745
Interest repaid by the transportation of mails, etc.....	11,177,435
Balance of interest paid by the United States.....	30,596,390

New Planets.

Perhaps no scientific achievement during the present century has been deemed more marvelous than the discovery of the outermost member (so far as is known) of the sun's family of planets. In many respects, apart from the great difficulty of the mathematical problem involved, the discovery appealed strongly to imagination. A planet seventeen hundred millions of miles from the sun had been discovered in March, 1771, through a mere accident, though the accident was not likely to occur to any one but an astronomer constantly studying the star-depths. Engaged in such observations, but with no idea of enlarging the known domain of the sun, Sir W. Herschel perceived the distant planet Uranus. His experienced eye at once recognized the fact that the stranger was not a fixed star. He judged it to be a comet. It was not until several weeks had elapsed that the newly-discovered body was proved to be a planet, traveling nearly twice as far away from the sun as Saturn, the remotest planet before known. A century only had elapsed since the theory of gravitation had been established. Yet it was at once perceived how greatly this theory had increased the power of the astronomer to deal with planetary motions. Before a year had passed more was known about the motion of Uranus than had been learned about the motion of any of the planets during 2,000 years preceding the time of Copernicus. It was possible to calculate in advance the position of the newly-discovered planet, to calculate retrogressively the path along which it had been traveling, unseen and unsuspected, during the century preceding its discovery. And now observations which many might have judged to be of little value came in most usefully. Astronomers since the discovery of the telescope had formed catalogues of the places of many hundred stars invisible to the naked eye. Search among the observations by which such catalogues had been formed revealed the fact that Uranus had been seen and catalogued as a fixed star 21 several times! Flamsteed had seen it five times, each time recording as a star of the sixth magnitude, so that five of Flamsteed's stars had to be cancelled from his lists. Lennomies had actually seen Uranus 12 times, and only escaped the honor of discovering the planet (as such) through the most marvelous carelessness, his astronomical papers being, as Arago said, "a very picture of chaos." Bradley saw Uranus three times; Mayer saw the planet once only. It was from the study of the movements of Uranus as thus seen, combined with the planet's progress after its discovery, that mathematicians first began to suspect the existence of some unknown disturbing body. The observations preceding the discovery of the planet range over an interval of 90 years and a few months, the earliest observation used being one made by Flamsteed on Dec. 23, 1690. There is something very strange in the thought that science was able thus to deal with the motions of a planet for nearly a century before the planet was known. Astronomy calculated in the first place where the planet had been during that time; and then, from records made by departed observers, who had had no suspicions of the real nature of the body they were observing, astronomy corrected her calculations, and deduced more rigorously the true nature of the new planet's motions.—R. A. Procter in the *Contemporary Review*.

Subscribe for the U. S. MILLER; \$1 per year.

The New York Produce Exchange Weekly reports for May 30th show as follows;

	1879,	1879,	1878,	1877,
May 24,	May 17,	May 25,	May 26,	
Wheat	bush.	bush.	bush.	bush.
Corn.	13,900,446	15,331,650	7,507,564	5,184,000
Oats	9,897,127	11,332,544	8,882,244	10,426,824
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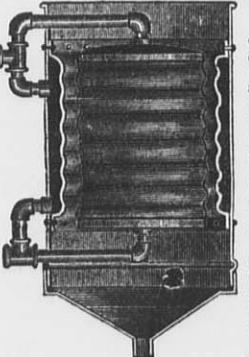
The Toad Market.—Among the curious sights to be seen in Paris must be reckoned the toad market. Toads are there sold by the barrel. Think of it!—toads selling like potatoes! Who buys them? Vegetable gardeners. Why? For the reason that toads devour the insects that would otherwise devour the vegetables. Who devours the toads? Contrary to some ideas—not the French people. But toads are being sold now, not devoured, and it is with the selling we are interested. How do they vend them? The man in blouse bares his arm, and thrusts his open hand into the slimy swim, and brings up two, three or four gymnastic toads, wriggling and writhing. He points out their merits, and delivers in a box by the dozen to the eager market gardener, who takes his choice and pays his price. The buying and selling is done expeditiously and quietly, and the profit to the vendors is great.

BOOKS.

Roper's Practical Hand-Books for Engineers and Owners of Steam Engines and Boilers.

Hand-Book of Land and Marine Engines.....	\$3 50
Hand-Book of the Locomotive.....	2 50
Hand-Book of Modern Steam Fire Engines.....	3 50
Catechism of Steam Engines.....	2 00
Use and Abuse of the Steam Boiler.....	2 00

The above Books embrace all branches of Steam Engineering—Stationary, Locomotive, Fire and Marine. Any of them will be sent by mail, free of postage, on receipt of publication price. To any one ordering a full set, a liberal discount will be made, and if on examination the pur-chaser does not consider them worth \$50 the money will be refunded. They are the only books of the kind ever published in this country, as they are so plain that any one who can read can easily understand them. Information by letter, when asked for, will be cheerfully given to those making inquiries about Scientific Books, Steam Engines, Boilers, Steam Pumps, Injectors or any kind of Steam Machinery. Address STEPHEN ROPER, 447 North Broad st., Philadelphia.

GRATIOT'S Improved Wheat Heater
Patented March 5, 1878.

The ONLY Heater made of HEAVY COPPER THROUGHOUT; and standing 175 lbs. Hydraulic Pressure. The ONLY Heater that EVENLY heats EACH and EVERY grain of wheat; and draws the moisture from the berry to the outside or bran; thereby THOROUGHLY TOUGHENING THE BRAN ON THE HARDEST or DRIEST Spring or Winter Wheat.
Send for descriptive circular.
GRATIOT BROS., Platteville, Wis.

EVERY DESCRIPTION OF RUBBER GOODS AT NEW YORK PRICES. GOODYEAR RUBBER CO. JAMES SUYDAM AGENT 370 EAST WATER ST. MILWAUKEE. BRANCH OF GOODYEAR RUBBER CO. NEW YORK.

R. G. HANDLEY'S MILL PICK WORKS,
38, 39 and 40 Lower Pershore St.,
BIRMINGHAM, ENGLAND.

I wish to call the attention of Millers, Millwrights, Mill Furnishers, Contractors and others, to the quality of my Mill Picks made by me. I manufacture them of the very best English Refined Silver Steel.

I warrant every Pick to cut the hardest French Burr. I shall be pleased to receive any orders. I supply retail and wholesale.

A LIBERAL DISCOUNT TO THE TRADE.

Always in stock a large quantity of various size Picks. P. S.—Prices sent free on application.

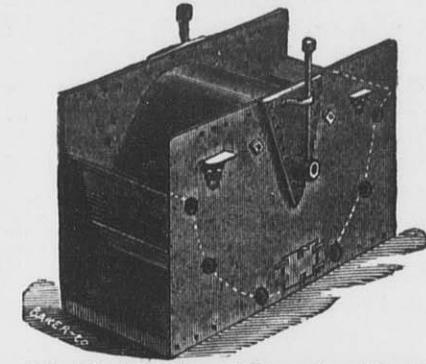
THE Milwaukee Middlings Mill-stone Co. are furnishing a complete outfit for Hayfork, Cal.

Bennett's Patent Elevator Bucket.



SPECIALTIES

MADE BY
The Rivet Bucket Co.
ESTABLISHED 1874.



The Rivet (Corn) Bucket.

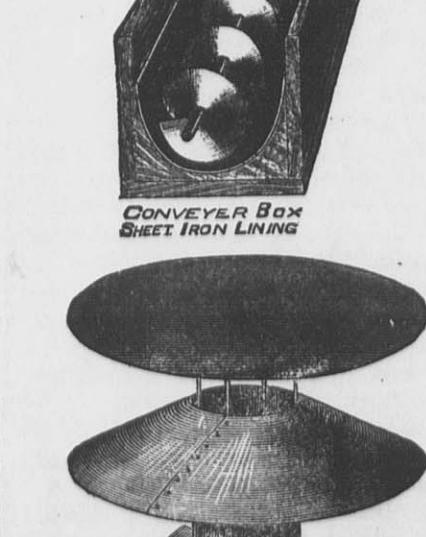
25,000 in Use.



PATENT IRON CONVEYER.



CONVEYER BOX SHEET IRON LINING



The Safety Ventilator.

Rids the mill of dust by the natural draught. These goods of extraordinary merit and cheapness, together with all Mill and Warehouse Furnishings, sold by

N. HAWKINS & CO., Supply House,

224 Washington St., Chicago.

Send for Lists and Prices of needed articles.

IMPORTANT ANNOUNCEMENT.

THE GARDEN CITY PURIFIER,

THE BEST IN THE WORLD,

AND THE ONLY PERFECT ONE.

LICENSED

UNDER

EVERY VALID PATENT,

INCLUDING THE

GEO. T. SMITH

PATENTS

AND THE

Situations Wanted, etc.

Millers, Engineers, Mechanics, etc., wanting situations, or mill-owners or manufacturers wanting employees, can have their cards inserted under this head for 50 cents per insertion, cash with order.

SITUATION WANTED—I have had two years practical experience in a good flour mill, and want a situation where I can finish learning the trade. I can furnish first-class reference. Address

GEO. P. WANDER, 512 Spring st., Buffalo, N. Y.

WANTED—Situation as head or assistant miller in some first-class firm. Twenty years' experience in steam and water mills. Speak German and English. Salary an after consideration. Address

ap* LOUIS HALLER, Hicksville, O.

WANTED—A situation as mechanical draftsman by a graduate civil engineer who has had thorough experience in marine and stationary engine work and general mill machinery. Good references furnished. Address C. E., Box 381, Bay City, Mich.

ap*

SITUATION WANTED—An experienced head miller, having been employed for many years in the Austro-Hungarian steam flour mills, desires to make a new engagement. Address B. G. 933, care of Hasenstein & Vogler, Vienna, Austria.

je2t

WANTED—Permanent situation by a miller of 18 years' experience, 12 years in the Northwest; understands "New Process;" am industrious, honest, and capable, and have a family; a place where there are good schools desired; can furnish references. Address C. C. A., care United States Miller.

ap3t

WANTED—A first-class foreman to take charge of a stone shop; must be perfectly competent to superintend building and finishing buhr stone. Best references required, and none but experienced men having acted as foremen need apply. A good chance for the right man. Address F. J. S., care United States Miller. aptf

WANTED—Millers out of employment and proprietors of mills to act as agents for the sale of the Ashland Patent Adjustable Sack Holder; one of the best selling articles out. Exclusive territory given. Sample sent to those who wish agency or to use on the receipt of \$1.50. Address L. JEFF. SPRENGLE, Ashland, Ohio.

WANTED—A situation as Oatmeal Miller by a thoroughly practical, competent man, sober and steady; understands all the different grades for home and foreign markets; the drying and handling of oats in all its details; has had a long experience and can come well recommended. Address "Oatmeal Miller," care of United States Miller, Milwaukee, Wis.

ap3t

SITUATION WANTED—A practical miller often years' experience with winter wheat (best flour on new process) desires a place in a thorough new process mill in any capacity in which he can perfect himself in the art of high grinding (spring or winter wheat). Am 33 years old, industrious and temperate in all things; wages no object; unexceptional references given. Address

A. D. REAMER,

June tf. Care of Reamer & Co., Chetopa, Kansas.

SITUATION WANTED—By a young man, who has had four years' experience in the milling business. Being part owner of the Neely Mills, Columbia, Tenn., he has had the management of those mills, keeping the books, superintending the grinding, and doing some traveling for the mills. The firm of which he is a member have just leased out the mill and property for a term of years, and he wishes to engage with a medium-sized mill in any capacity. Can take charge of, and successfully run, a 2 or 3 run mill, attending to the stone dressing, grinding, and anything else necessary to do. Has had a good business education, and can furnish the best of references as to honesty, energy, and social standing. Address E. O. NEELY, Box 137, Columbia, Tenn.

mytf

For Sale or Exchange.

Advertisements under this head \$2 per insertion, cash with order.

PARTNER WANTED—I have a good Grain Elevator, large enough to run a flouring mill. Would like a partner who can furnish the necessary machinery. Parties having mills not paying will find it to their interest to correspond with me.

je* T. B. GALLAGHER, Larned, Kansas.

FOR RENT—I offer for rent my Grist and Saw Mill; 3 run of stone; House and Garden; Good Water Power; Water all year round; for term of years. For particulars call in person or by letter. M. HELD,

Erfurt P. O., Jefferson Co., Wis.

FOR SALE—A grain elevator in the best grain-growing section of Kansas. County seat. Splendid business. Address LOUIS C. WITHAUP, Clyde, Kansas.

ap*

FOR SALE—Steam power saw mill for sale cheap, and on reasonable terms. Mill is in good location, and is doing a good business. Satisfactory reasons will be given for selling. Call on, or address

SMITH & TUCKER,

Feb Cawker City, Kan.

FOR SALE—Custom and merchant mill; steam power; three run of burrs; the mill has a good run of custom and the flour a good reputation; mill is situated in a fine wheat country and at the junction of three railroads; satisfactory reasons given for wishing to sell. For particulars address Box 106, Altamont, Effingham county, Ill.

aptf

FOR SALE—A flouring mill, saw mill and 265 acres of land; 55 acres improved at a price to suit the times for one-half cash; balance long time. The water power is unsurpassed; two run of burrs with necessary machinery. Mill thoroughly repaired last season. Good wheat country. Situated at Orange, Juneau Co., Wis., on the M. & St. P. R. R. Address J. G. EVANS,

mrft

Orange, Juneau Co., Wis.

FOR SALE—A grist mill with two run of stone, on one of the best and clearest water powers in the country. Two houses—one a hotel—barns, sheds, hog pen, ten lots with fine fruit trees, in the village of Bird, Oceana Co., Mich. The whole can be had for the give away price of \$4,500, or one-half for \$2,500. Being in other business the subscriber feels compelled to sell. Address at once, J. PALMINTER,

mr*

Hart, Oceana Co., Mich.

FOR SALE—A 2-run flour mill. Good burrs and bolts in perfect order and doing a good business. Water-power has 14 feet fall, fed by large lake. No ice or floods to contend with. The mill makes good flour and there is plenty of grain in the vicinity. The mill lot contains 4½ acres in the town with two dwelling houses, large barn and shed. With the mill will be sold 80 acres of timber land one mile from town. Terms: \$2,000 cash down, and balance in store goods or on five years time. Address for full particulars, W. M. SKINNER,

febit

Mount Morris, Waushara Co., Wis.

FOR SALE—The Flouring Mills at Troy, Kansas, known as the "Banner Mills," in successful operation, with well-established trade. Location unsurpassed. Railroads in every direction. Fine wheat and corn country. The best county in Kansas. Troy, the county seat, is a thriving town with good schools, etc. The mills have four run of burrs, and the machinery throughout is all first-class. Undoubtedly the best constructed mill in the West. The best opening for business. On account of the ill health of the managing partner the property will be sold at a great bargain. Address

je* TRACY & PARKER, Troy, Kansas.

FOR SALE—I offer for sale a first-class modern flouring mill in this city, making 100 barrels a day; power-water and steam; have not stored a barrel this crop, selling as it arrives in New York; this is a fine opening for any one wanting a mill; property cost \$40,000, but will be sold cheap and on reasonable terms; reason for selling, belongs to an undivided estate. Address J. D. GREENE, Administrator, Faribault, Minn.

apf

DR. ROY B. SCOTT, Trinity Mills, Texas.

For Sale or Exchange.

Advertisements under this head \$2 per insertion, cash with order.

FOR SALE—Two-run steam mill; best run of custom in the county; two houses and barn. Pays 10 per cent on \$8,000. Cheap for cash, or half cash. Address J. NO. F. McGuIRE, Clinton, Iowa.

FOR SALE—A flouring mill, saw mill, and 265 acres of land on the M. & St. Paul R. R. Plenty of wheat and a splendid water power. Half cash, balance long time. Address J. G. EVANS, Orange, Wis.

FOR SALE—A second hand Diamond dressing machine, made by Griscom & Co., with McFeeley Furrowing Attachment. Letter D. Has been in use but a short time and is as good as new. Will be sold cheap for cash. Address H. B. SHEARS, Oconomowoc, Wis.

FOR SALE—The entire machinery of a 4-run 4-ft stone, new process flouring mill, that cost \$50,000, now offered for \$5,000; 16x32 engines, 2 tubular boilers, No. 7 Stillwell heater, all new, not run over 3 months. This is a rare bargain. W. MORRILL, 124 Dearborn st., Chicago.

FOR SALE—The machinery and fixtures, including boiler and 30-horse power engine, and lease of building of Eureka feed mill, 221 E. Lake St., all in good running order; good location; trade already established. Will be sold at a great sacrifice. T. H. FOSIER, assignee, 155 Washington st., Chicago.

FOR SALE—Flouring Mill—Steam-power, four run of stone; main building, frame, 30x6, 2½ stories, with brick basement; brick engine-room, 20x30; building and machinery new; new process; complete in all respects; located in a flourishing town in western Iowa, at junction of three railroads; fuel cheap, doing a good business. Will sell a half interest or whole. Address M. VYNNE & KEY, Council Bluffs, Iowa.

FOR SALE—To buy or rent a mill, by a practical miller thoroughly versed in merchant and grist work. Talks both English and German, and can give best of references. Address S. KAMERER, Fountain City, Buffalo Co., Wis.

FOR SALE—A good steam flouring mill at Cawker City, Kansas. The location is exceptionally good. The best of wheat and other grains produced in great abundance. The investment will surely make heavy returns. The Atchison, Cawker City & Denver Railroad will be completed to this point on or before June 1st, 1879. Parties desiring to secure a good location may address for any further information, EDMUND O. GARRETT, Cawker City, Mitchell Co., Kan.

FOR SALE OR RENT—One of the best steam flouring mills in the State. Four stories, brick and stone, slate roof, four run of burrs. Adapted to new process. Everything new. Best wheat region of the State. Fuel cheap, water plentiful. Near depot and has side track, cooper shop, wagon and stock yards. Pleasant town of 2,000 inhabitants. Satisfactory reason given—neither of us know anything whatever about milling. Terms easy. Fine bargain. Address C. H. HEARD & SON, McLeansboro, Ill.

FOR SALE—Flour and Saw Mill—One-half interest in a first-class three-run Steam Flour and Saw Mill. The saw mill is a double rotary, with gang edger, cut-off and bolt saws and shingle machine. It has been built but 18 months, and is in as good a wheat country as there is in the State. My object in selling is to have cash in hand to put in a good country store in connection with mill. Would prefer to sell to a miller or a man that is well posted in store business who can command from \$6,000 to \$7,000 and furnish good reference. I will guarantee good margin to the trade. Address all communications to A. J. FULLERTON, Bonduel, Shawano Co., Wis.

feb*

FOR SALE—Best Mill in Southern Pennsylvania—This mill, situated in a small village within four miles of Broad Top coal fields, was recently rebuilt with all modern improvements and is in good repair. Mill is on a never-failing stream, with 30 feet head and is propelled by two turbine wheels. Has three run of burrs and one run of choppers. Building is frame, 42 by 50, and four stories high. Machinery is suited for making either merchant or custom work. Belonging to the mill are a good saw mill, 180 acres of farm land, 100 acres of valuable bark-timber land, three dwellings and a store-room. The owner of the above property will also sell three separate tracts of good bark and fine timber land, containing 400, 280 and 72 acres. For further particulars call on or address, WILSON BERGSTRESSER, New Grenada, Fulton Co., Pa.

feb*

FOR SALE OR RENT—A five-run steam mill, located at Manchester, St. Louis Co., Mo., eighteen miles west of the city of St. Louis. It is located in a never-failing wheat country and is supplied directly by the farmers at reasonable figures. The mill has been run profitably for the past sixteen years. Was rebuilt on a thorough and convenient plan six years ago. Good reasons for wishing to sell or rent. Mill is running to its full capacity and is doing a good business. No competition, no railroads. All of the oil sold at the mill, and a large trade established for the flour. Will be sold to parties having part cash; long time given for remainder at a reasonable rate of interest, or will rent on reasonable terms. Address or call on the proprietor, JACOB SCHREINER, Manchester, Mo.

feb*

FOR SALE—A four-run steam flouring mill, all in first-class running order. Three 3½ foot burrs for wheat and one 3½ foot chopping burr, one Eureka wheat cleaner and a Eureka smutter, Garden City middlings purifier, Excelsior bran duster, Eureka flour packer and all other machinery necessary to complete a first-class mill. Two 28-hp boilers, 65-horse power engine. Still-well heater. Frame building and seven desirable town lots belonging to the property. Side track of A. T. & S. railroad close by the mill, which is located in the city of Sterling, Rice Co., Kansas, in the midst of the best wheat district in the Arkansas valley. The parties owning the mill are not practical millers, and are engaged in other business. They will sell the property low and on easy terms. Address LANDIS & HOLLINGER, Sterling, Rice Co., Kan.

feb*

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DR. ROY B. SCOTT, Trinity Mills, Texas.

BOTTLED BEER.

VOECHTING, SHAPE & CO.,

SOLE BOTTLERS OF

Joseph Schlitz Brewing Company's Celebrated Milwaukee Lager Beer

COR. SECOND AND CALENA STREETS,

MILWAUKEE - - - WISCONSIN.

BOTTLERS' SUPPLIES CONSTANTLY ON HAND

Parties corresponding will please state where they saw this advertisement.

my15

WHITE LEAD WORKS.

We grind as a specialty a Strictly Pure Colored Lead in paste form (not liquid paints), and put up in 25, 50 and 100-lb. kegs. By actual test we have demonstrated colors ground into Lead makes a more permanent and fast in color. As to durability it has no superior. We place a guarantee label on each package of 95 per cent. lead, and not over 5 per cent. coloring matter.

J. E. PATTON & CO.,

MANUFACTURERS OF

WHITE LEAD, COLORS AND VARNISHES.

NOS. 268 TO 272 EAST WATER ST., MILWAUKEE.

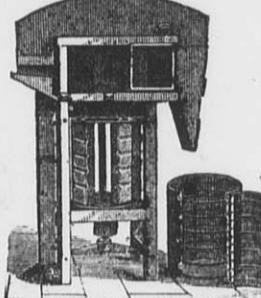
Sample of colors sent by mail on application.

Parties corresponding will please state where they saw this advertisement. my15

Established in 1856.

THE "EUREKA"

Smut and Separating Machine.



THE "EUREKA

Attention, Millers!

Greatest MILLING Invention Of the Age.

No Patent Staffs Wanted.

NO HUMBUG! GENUINE! TRUE!

No Mill-Stone can Positively be TRUED by any of the Staffs now in use.

I have invented, and secured by letters patent, No. 211,244, an Improved Method for Truing the Grinding Surfaces of Mill Stones. Having been practically engaged in the milling and mill-stone business for over 30 years I have learned the great value of having a perfectly true face on grinding stones, and during the past 10 years I have expended a great deal of time and money in making my invention and securing my patent. The very foundation of successful milling is in the proper treatment and use of the mill-stone. A true face will make even, uniform flour and a large percentage of middlings, while an uneven stone will cause uneven grinding and poor flour, which no purifier or system of bolting will rectify. With a true face on the mill-stone the miller can set his irons right, can turn the spindle right, can get the level right, and not half the work in dressing will be necessary. This is a matter of the

UTMOST IMPORTANCE TO MILLERS,

And I respectfully call your attention to it, and invite correspondence.

I have just sold rights for mills to the following well-known mill owners, to any of whom I refer you:

Nunnenmacher & Co., Milwaukee, Wis.
Gerlach & Dittmarsch, Milwaukee, Wis.
Huntingdon & Koch, Barton, Wis.
Smith & Co., Grafton, Wis.
Volker & Jonas, Saukville, Wis.

W.M. LEHMANN,
722 Fourth St., Milwaukee, Wis.

je

Geo. Guettler, Thiensville, Wis.
Milwaukee Milling Co., Milwaukee, Wis.
Orville Hathaway, Oconomowoc, Wis.
F. Miller & Co. (2 mills), Watertown Wis.
Barnes & Hodson, Janesville, Wis.
Coman & Morrison, Fox Lake, Wis.
E. R. Hoyt & Son, Beaver Dam, Wis.
H. G. Mathews, Brandon, Wis.
Filer, Stowell & Co., Milwaukee, Wis.
Schauble & Vallansch, Fredonia, Wis.
Wm. Albrecht & Co., Newburg, Wis.
Wehausen & Co., Cedarburg, Wis.
Bodenndoerfer & Zaan, Cedarburg, Wis.
Schroeder & Trottman, Cedarburg, Wis.
Chas. G. Deisner, Pewaukee, Wis.
M. Held, Jr., Sullivan Mills, Jefferson Co., Wis.
G. Schnekenbuhl, Palmyra, Wis.
Chas. Geisener, Pewaukee, Wis.
Hotchkiss & Puhlman, Plymouth, Wis.
Bickbauer & Klumb, Plymouth, Wis.
J. Bauerkind & Co., Glenbeulah, Wis.
Maurer & Co., Johnsburg, Wis.
Vallier & Spies, Marine, Ill.
H. Rodee, Ogdensburg, N. Y.
Bennett Bros. & Co., Geneva, Ill.

I have placed my price for RIGHTS for mills at an extremely low figure, considering the value of my invention, so as to bring it within the reach of all. For further information and correspondence address

B. F. GUMP,

No. 53 South Canal Street,

Chicago, Illinois.

GENERAL MILL FURNISHER,

COMMISSION MERCHANT,

AND CHICAGO AGENT FOR

GENUINE DUFOUR & CO.

BOLTING CLOTHS.

I HANDLE NO OTHER BRAND.

All numbers kept constantly in stock to supply the largest order at a moment's notice. Grit-Gauze Cloths equal in Mesh to 000 to number 6 inclusive always on hand.

Flour Mill Trimmings a Specialty.

Such as Rubber, Leather, and Solid Wove Cotton Belting, Elevator Buckets and Bolts, Bran Dusters, Wire Cloth, Plated Wire Cloth, Brass Wire Cloth, Water and Steam Gauges, Boiler Injectors, Pumps, Packing, Smutters, Corn Shellers, Portable Mills, &c., &c. And all necessary articles for Mills at prices to suit the times.

Send in your orders.

marly

**WALKER'S
BELT TIGHTENER.**

Indispensable for Safe and Economical Operation of Belts on Vertical Shaft and Spindle Pulleys. Prices Reduced. Circulars free. Address GEO. WALKER, Box 222, Hamburg, Erie Co., N. Y. [Mention United States Miller.]

je6m

WARD & CO.,

Manufacturers of FRENCH BURR

Mill-Stones.

Under Ward's Patent. Address

WARD & CO.,

CHICAGO, ILL.

Mill-stones. Old and New Quarry, solid, and built on edge. Stones specially prepared for grinding Middlings, made of stock selected for that purpose; also those built on P. W. Ward's new plan as shown in the annexed wood cut.

MRS. WARD.

JOHN HEENEY.

JOHN KEEGAN.

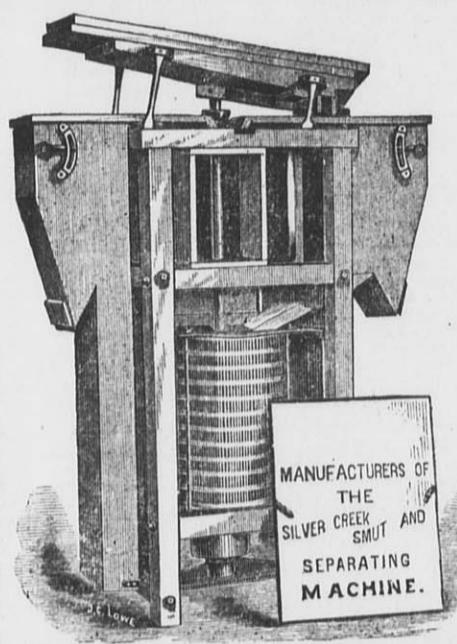
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THE SILVER CREEK

Smut and Separating Machine

With Adjustable Shaking Shoe and Changable Cockle-Screens, whereby all Cockle can be extracted from the Wheat. Will do thorough work, both as a Scourer and Separator.

Warranted not to cut or break wheat.



Bolting Cloths

A SPECIALTY.

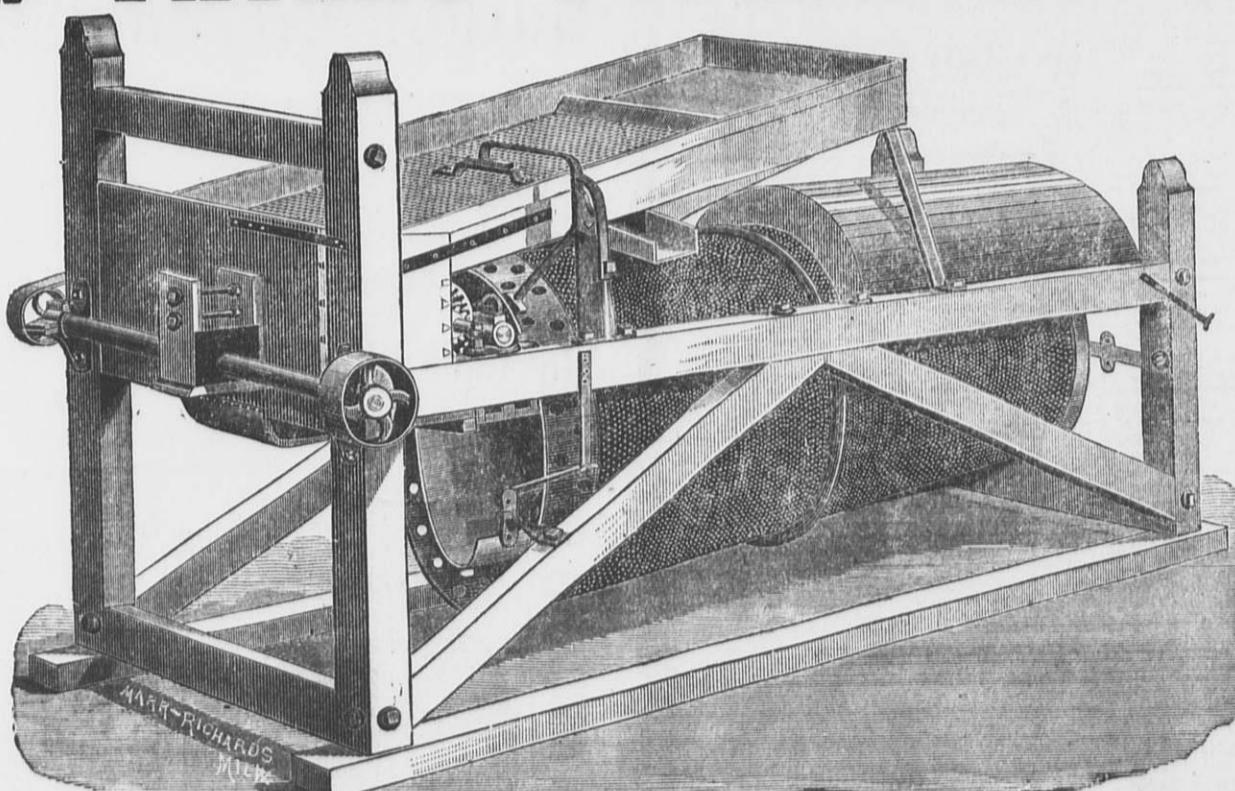
Send for descriptive circular. Address

Nagle, McNeal & Co.

aug Silver Creek, N. Y.

KURTH'S PATENT COCKLE SEPARATOR.

Cor. of Florida and Clinton Streets,



MILWAUKEE, WISCONSIN, U. S. A.

The above illustrated machine separates perfectly cockle, wild peas, wild buck-wheat, and other similarly-shaped foreign seeds from wheat. Requires but little power to run it. We also manufacture an

OAT SEPARATOR,

Which is fully equal to any manufactured. This is made in two styles, and is in combination with Cockle Separator. One style has two suction, one operating on grain as it enters the machine and the other as it leaves it, each being independent of the other and easily regulated. The other style has one suction, which may be either first or second. Among our references we respectfully call attention to the following:

MINNEAPOLIS, Minn., Jan. 9, 1879.—Cockle Separator Manufacturing Company—Gents: We have used your Cockle Separator for the past three years, to our entire satisfaction. We commend them to all in want of a perfect machine. Yours truly, J. A. CHRISTIAN & CO.

MINNEAPOLIS, Minn., Jan. 16, 1879.—Cockle Separator Manufacturing Co., Milwaukee—Gents: In answer to your favor, would say that we have in use four of your Cockle Machines, and find them to be the only machines that we have yet seen that will separate the cockle from the wheat. The improved machines give us no trouble in any way. We shall want two more machines soon, to replace those burned in our Anchor Mill. Yours, CHAS. A. PILLSBURY & CO.

MINNEAPOLIS, Minn., Jan. 9, 1879.—Cockle Separator Manufacturing Co., Milwaukee: We are using two of Kurth's Patent Cockle Separators, and while they work somewhat to a disadvantage on the present crop, we know of nothing that will do the work as well. We consider them the best machine made. Yours truly, BULL & NEWTON.

AKRON O., Jan. 27, 1879.—Cockle Separator Manufacturing Co., Milwaukee—Gentlemen: Having three of your

We make a machine especially for extracting Cockle and other similar Seeds from OATS and BARLEY, which is of great importance to oat-meal manufacturers, malsters, etc.

Send for Illustrated Catalogues, describing machine fully with diameter, capacity, etc., to

COCKLE SEPARATOR MANUFACTURING CO.,

P. O. BOX 180.

Cor. Clinton and Florida Sts., MILWAUKEE, WIS. U. S. A.

Cockle Machines in operation, I have learned to appreciate their value, and trust that the fourth, ordered a day or two ago, will be shipped without delay. I want this in addition to the two machines I have already running on wheat, that I may be able to do absolutely perfect work, and cheerfully recommend them to those who aim at perfect work. On the other hand, I was free to admit, the other day, that your Separator is of no use to millers who argue that cockle makes good white flour, increases its bulk, and that therefore it is wasteful to take it out. Yours FERD. SCHUMACHER.

OSWEGO, N. Y., Jan. 29, 1879.—Cockle Separator Manufacturing Co., Milwaukee—Gents: We are pleased to say that our use of your machines for the last two years, has been highly satisfactory, and especially do we like the new double suction machine, which does its work so perfectly that we would not like to do without it. Indeed we deem the machines indispensable in good milling, particularly with spring wheat. Your friends, PENFIELD, LYON & CO.

WHITEHALL, Wis., Dec. 11, 1878.—Cockle Separator Manufacturing Co., Milwaukee—Gentlemen: Allow us to say that the machine works to a charm, and that we calculate our flour is worth fifty cents more per barrel for the use of it. Respectfully yours, WHITEHALL MILL CO.

mar

THE UNITED STATES MILLER.

THE LATEST IMPROVED
HUGHES BRAN DUSTER.

Pat. Aug. 14. 1877.

PERFECTION ATTAINED AT LAST

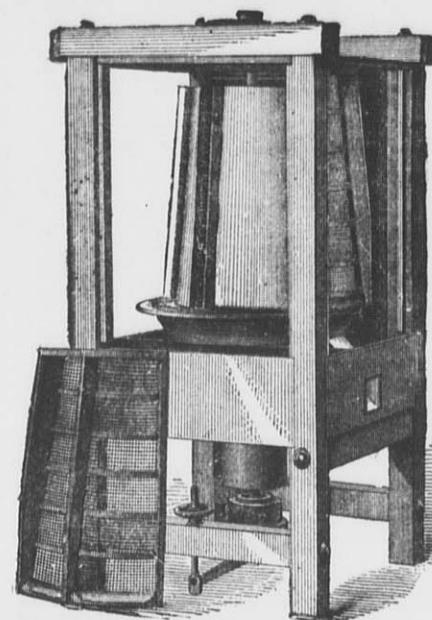
Will ship to responsible parties on trial and warranted to give

ENTIRE SATISFACTION OR NO PAY.

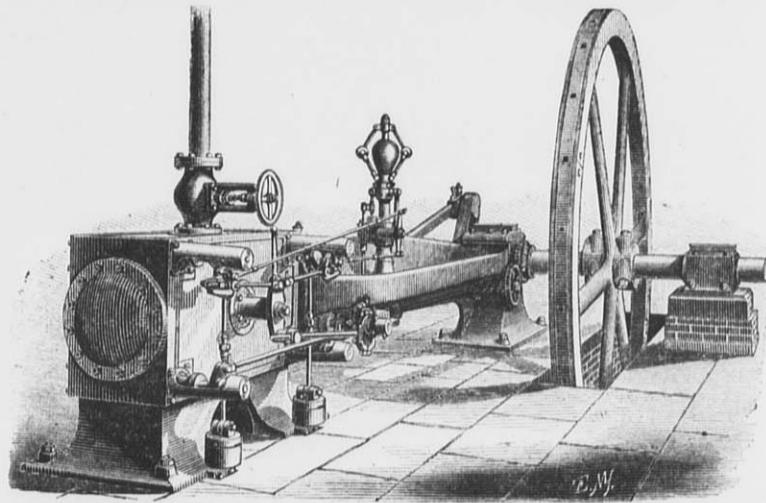
A CHALLENGE!

As all manufacturers of Bran Dusters claim their machines to be the best, we will agree to pay for any machine made in the world that will compete with ours, and be adjudged superior by competent judges, provided any other party will do the same with us.

Send for circular to

STEPHEN HUGHES & CO.,
je HAMILTON, OHIO.

ATLAS-CORLISS ENGINE!



WRITE FOR ENGINE PAMPHLET.

ATLAS ENGINE WORKS, INDIANAPOLIS, INDIANA.

BUILDERS OF ALL CLASSES OF

Engines and Boilers.

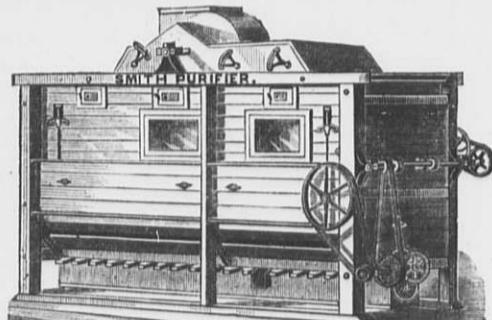
We build The Best Farm Engines and Small Engines for Warehouses and Elevators.

January

**The Geo. T. Smith
IMPROVED MIDDLING PURIFIER.**

SIMPLE, DURABLE, ECONOMICAL,

AND REQUIRES BUT LITTLE POWER.



Purifies Middlings or Returns from Hard Spring or Soft Winter Wheat, thoroughly, and without waste.

HAS

**The Traveling Brush, The Sectional Draft, The Pockets,
AND MANY OTHER IMPORTANT FEATURES.**

A large number are in use in the successful New Process Mills of this country.

We manufacture eight sizes, adapted to the smallest or largest mills. Our prices range from \$225 to \$600, and cover a license under all of the patents owned by the Consolidated Middlings Purifier Company.

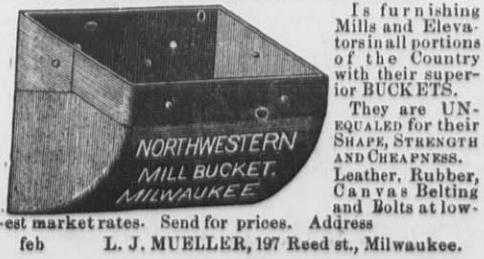
Send for our New Circular and price list with references.

Address the Manufacturers,

Geo. T. Smith Middlings Purifier Co.,

JACKSON, MICHIGAN.

THE
Northwestern Mill Bucket Manufactory
310, 312, 314 FLORIDA STREET,



SLATER'S IMPROVED
Bolting Reel

Warranted the best in the world. The only Reel that will dust Middlings perfectly.

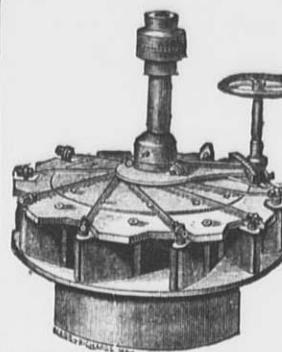
BOLTING CHESTS of any capacity at prices to suit the times.

DUFOUR & CO.'S BOLTING CLOTH.

Superior Wheat Scouring and Brush Machines. General Mill Furnishings.

CHARLES B. SLATER & CO.,
Blanchester, Ohio.

oet



VAN DE WATER'S NEWLY IMPROVED
JONVAL TURBINE WATER WHEEL.

83 PER CENT. GUARANTEED.

No wise man in want of a good 83 per cent. Water Wheel will hesitate in sending his orders for wheels from 6-inch to 72-inch diameter. All orders will be promptly filled on the following conditions: The Wheels may be tested by James Emerson, of Holyoke, Mass., or any other party who has a testing flume desired by purchaser. I will build my wheels to order and guarantee them to give 83 per cent. of the useful effect of the water used, and accompanied by the certificate of the party who may test the Wheel for the purchaser, under the following conditions: Purchaser to pay 10 per cent. additional to the price of the Wheel for freight and resting, providing it gives 83 per cent., and if only 80 per cent. is obtained the additional 10 per cent. will not be charged, but the Wheel shall be considered sold, and if less than 80 per cent., No SALE. It is true every turbine builder claims to have the best Wheel in the world, but, if purchasers of Wheels would insist upon having them tested, disreputable and ignorant Wheel builders would be driven from the market. A poor turbine is dear at any price, and the public knows that I am right in so saying.

REDUCED PRICE LIST, NOVEMBER 1, 1878:

Diameter of Wheel, inches.	6	9	12	16	20	25	30	36	42	48	54	60	66	72
Price	\$175	\$180	\$190	\$200	\$215	\$225	\$250	\$275	\$300	\$325	\$350	\$360	\$375	\$390

It is optional with the purchaser to take Wheel tested or not, for the above price from shop. Address all communications to

HENRY VAN DE WATER, Auburn, New York, U. S. A.

REFERENCES:

ROCHESTER, N. Y., May 28, 1874.—H. Van De Water, Esq.—DEAR SIR: In regard to the 16 inch Water Wheel I bought of you I will say, that under a 28 foot head I am told by the miller that it runs 2-run of stone 4½ feet in diameter, grinding 16 bushels of feed and 10 bushels of wheat per hour at $\frac{1}{2}$ gate, which the old over-shot wheel never could do with that amount of water. I am satisfied that yours is the best Wheel made. Wishing you success with your improvements.

I am, yours respectfully,

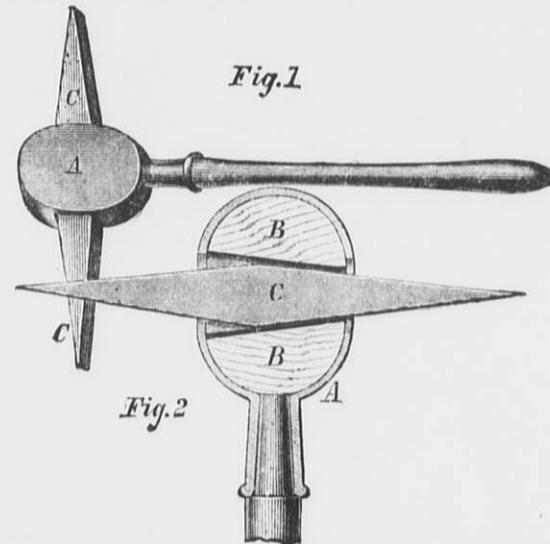
N. S. FULLMAN.

J. O. Kendall & Co., of Hartford, Wis., say of their 30-inch Wheel: "It will dress and grind from 5 to 6 bushels of wheat per hour on each pair of burrs and from 15 to 20 upon the feed-run, and can drive them all to do the above amount of work. We have 5-run of 4-foot burrs and 1 feed-run, also a large amount of cleaning machinery, and the Wheel runs them all to our satisfaction."

Any number of references can be furnished upon application.

my

Noye's Patent Pick Holder



The Only Holder Worthy of the Name.

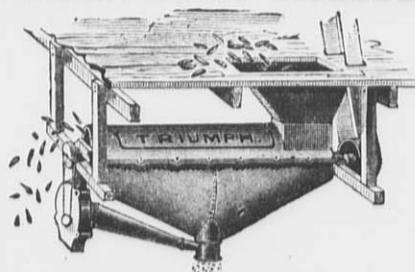
The Pick can be adjusted at will to strike the Stone at any desired angle. We have constantly on hand a large assortment of our celebrated

Cast Steel Mill Picks

AT PRICES TO SUIT THE TIMES.

JOHN T. NOYE & SONS, Buffalo, N. Y.

april 12p

TRIUMPH
POWER CORN SHELLER!

Shells and Cleans 2,000 Bushels Ears per day.

The Cheapest, Best and most Simple Power Corn Sheller in use. Send for Circular and Price List.

HULBERT & PAIGE,
oct Painesville, Ohio.

Mill Pick Works

—OF—

HENRY HERZER,

MANUFACTURER AND DRESSER OF

Mill Picks,

456 Canal Street,

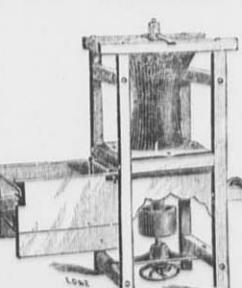
MILWAUKEE, ————— WISCONSIN.

I desire to call attention to the durability of MILL PICKS made and dressed by me. I manufacture them of the best ENGLISH STEEL, and warrant all work to give satisfaction.

I shall be pleased to receive your orders, as I always have a supply of New Picks on hand, and give particular attention to dressing Picks.

GEO. R. GALE,
PROPRIETOR OF
HAYWARD MILL FURNISHING WORKS

Corn Sheller



R. P. WARD,

MANUFACTURER OF

THE IMPERIAL

Corn Sheller



IMPORTER AND DEALER IN

HENRY BODMER'S CELEBRATED

Het Anker (Brand) Bolting Cloths.

MANUFACTURER OF

THE BEST QUALITY OF

FRENCH BURR MILL-STONES.

Office, No. 66 River Street,

CLEVELAND, O.

Send for descriptive circular.

WILL also CLEAN the SHELLLED CORN.

Send for descriptive circular.

R. P. WARD,

SILVER CREEK, CHAUTAUQUA CO., N. Y.

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nov

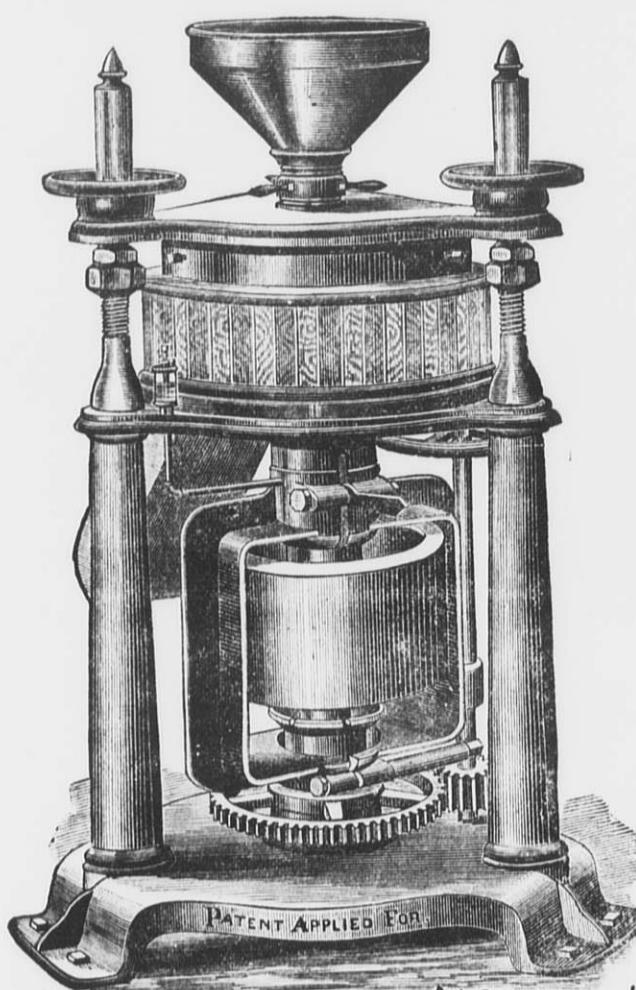
CREAM CITY IRON WORKS.

Milwaukee Middlings Mill-Stone Company,

MILWAUKEE, WISCONSIN,

MILL BUILDERS AND FURNISHERS,

AND SOLE MANUFACTURERS OF



Jonathan Mills'

Wheat and Middlings

Mills.

MOST PERFECT DEVICE ever INVENTED for REDUCING GRAIN to FLOUR.

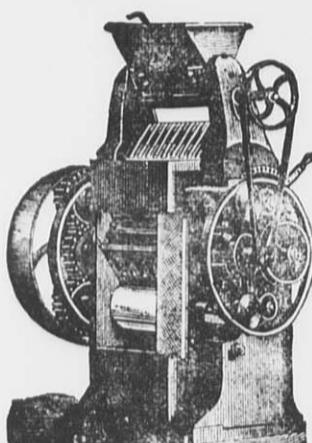
REQUIRES LESS POWER, LESS ROOM, and LESS ATTENTION
Than any other MILL Manufactured.

AND CAN BE SET ON ANY GOOD MILL FLOOR WITHOUT EXTRA FOUNDATION.

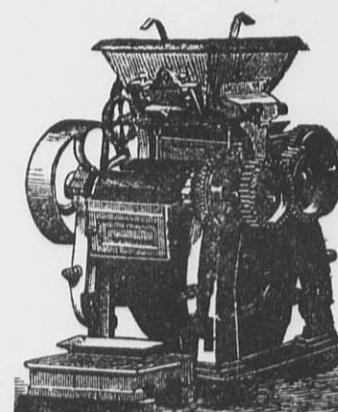
Send for Circular and Price List to the MILWAUKEE MIDDLING MILL-STONE CO.,
MILWAUKEE, WIS. Plans and Estimates furnished on application for
complete Flouring Mills on our system.

VIENNA EXHIBITION, 1873, Awarded Diploma of Honor.

PARIS EXHIBITION, 1878, Awarded 2 Gold Medals and 1 Silver Medal.

GANZ & CO.'S
Iron Foundry and Manufacturing Association,

Buda-Pesth, Hungary, or Ratibor, Germany.



We take this method of recommending to the American milling public our PATENT ROLLER MILLS with chilled cast iron rollers, for crushing and grinding wheat, which have met with such eminent success in Europe. The mill-owners of BUDA-PESTH, as well as the prominent millers of Austro-Hungary, and a large number in Southern Germany, Switzerland and England, have provided for their mills the celebrated GANZ ROLLER MILLS, which are about to supplant entirely grinding on mill-stones, their working being more perfect, producing more white flour, requiring less power than the best mill-stone, and wanting no repairs excepting to occasionally replace a bearing. We have introduced into the art of milling these Roller Mills with chilled cast iron rollers, and from 1874 to January, 1879, we have delivered in the different European countries, Africa and the United States of America about 2,100 mills, and all work satisfactorily. Our crushing mills may now be regarded as absolutely necessary for every well-furnished modern mill, and this is proven by the numerous testimonials at hand. Our grinding mills are remarkable for their absolute discharge bearings, by means of the newly-devised Anti-Friction Pressure Rings. These Rings allow a very high pressure, and hence assure the performance of a great deal of work, avoiding all waste of power caused in other machines by friction in the bearings.

Out of numerous testimonials at hand we select the following:

BUDA-PESTH, March 28, 1878.—To Messrs. Ganz & Co., Foundry and Engineering Co., Limited, Buda-Pesth: Complying with your request to communicate to you my experience with your Roller material, I have pleasure in stating that I consider it, i.e., your generally well-famed chilled iron, as the best within my experience, and its adoption has satisfied me in every respect, so that I do not hesitate to assert, by introducing it on a large scale, you have rendered a considerable service to the milling art. Your material is equally well adapted for rough grinding, softening or grinding. Owing to its great hardness I cannot characterize it otherwise than indestructible. The grooved cracking rollers have demonstrated this hardness, as also a toughness, of your castings in a manner which astonishes all who know the rapid wear of cutting edges used in the treatment of grain. Your smooth rollers, once properly ground, preserve their complete cylindrical form, and do not require any repair for a period which even now cannot be estimated. They acquire, soon after being put to work, a finely-gritted surface texture, eminently adapted for grinding as well as for drawing down the meal, a condition which they preserve without change. It is quite superfluous to prove that there can be absolutely no question of discoloring unless with reference to new rollers, to which some remnants of oil, emery or other matter may yet adhere. The flour produced by your Chilled-Iron Rollers is very lively and has remarkable baking qualities. While stating the above to the best of my conviction in answer to your inquiry, I seize with pleasure this opportunity to express to you my thorough approbation, not only of your roller material, but also generally of your roller mill construction. Your rough grinding (cracking) with your roller mills constitutes such an essential step in advance as compared to the rough grinding with stones, that they cannot fail to win their way into every well-built mill, working on the high or half-high grinding system. For the purposes of reduction to flour you have lately erected a form of mill which I consider extraordinarily successful. You have by the introduction of an entirely new mechanical organ, i.e., the Rotary Anti-friction Spring Pressure Ring, solved the problem of discharged bearings, which has so often been raised and as often dropped again unanswered. You have achieved success with decided aptitude in a manner as wondrous as it is simple and practical. This Roller Mill absorbs, in fact, only just the power required for the reduction into flour, and none for bearing friction, which usually, as is well known, amounts to a high figure. This Flour Mill receives an agreeable and light form while attaining a capacity hitherto unknown. In handing you the above communications for use as you may deem desirable, I remain, etc.

(signed) C. HAGGENMACHER, Director of the First Ofen-Pesth Steam Mills.

TIVOLI KUNSTMUEHLE, Munich, April 5, 1878.—To Messrs. Ganz & Co., Engineers, Buda-Pesth—Dear Sirs: In reply to your esteemed of March 28, we have pleasure in testifying to our satisfaction with the Chilled-Iron Rollers

supplied to us by you. We have now had both smooth and fluted Rollers in use for the last two years, and have not found any appreciable wear in the smooth Rollers. With reference to the work and capacity we can but report favorably. The Flour produced by them is lively, and not killed as has been stated in some quarters, while its baking properties are first rate. Referring to the lately supplied fluted Rollers, Mechwart's Patent, grooved on the new method, they work admirably and are especially to be recommended for medium wheats. Recapitulating, your Roller material is as tough as it is hard, and therefore in every way adapted for the purpose it is intended. We remain,

TIVOLI KUNSTMUEHLE, A. MUELLER.
BUDA-PESTH, July 16, 1877.—Messrs. Ganz & Co., Buda-Pesth—Gentlemen: The most satisfactory results which, on testing the different Wheat-breaking Machines, we obtained from your Fluted Rollers, induced us to adopt your system and, in consequence, we already provided our mill with a great number of your Breaking Rollers. In consideration of the experience derived from use of these Rollers we beg to point out as particular advantages of your Wheat-breaking System that extremely little flour is produced, provided the rollers are used as directed, that your Rollers most satisfactorily detach the Semolina from the Bran, and thoroughly separate the Germ-Particles, and finally that they are of an astonishing durability, and that it requires no skilled labor to manage them. Moreover it must be stated that your system suits perfectly well any process of Breaking-Wheat. It affords us so much more pleasure to give you the above account, as we are inclined to think that by the construction of these Rollers you have achieved an essential progress in the milling industry. Yours truly,
PESTER WALZMUEHLE-GESELLSCHAFT. Riedle, m. p. Burchart, m. p.

BUDA-PESTH, July 11, 1878.—Messrs. Ganz & Co., Engineers, Buda-Pesth—Dear Sirs: Having had occasion to try your newly patented Roller mills with others, known until now, I feel induced, regarding their excellent qualities, to give orders for furnishing me the Roller mills to be erected in my two mills. These Roller mills are to be recommended by their construction, surpassing all known until now, and especially for their remarkable capacity, doing much work with little power. Believe us, gentlemen, Yours truly,
HEINR. HAGGENMACHER.

BRANDERS A. ADLER, Bohemia, February 13, 1879.—Messrs. Ganz & Co., Buda-Pesth—Gents: I give you my best thanks for your delivering to me your well-made and well-working machines, as well as for those 2 machines you delivered me last year. I have no objection to your publishing this. Yours faithfully,
G. HANNAK, Civil Engineer and Mill-owner.

Address all communications to

GANZ & CO., Buda-Pesth, Hungary,

Cable Address "GANZ, Kaiserbad."

apr

Or GANZ & CO. Ratibor, Germany.